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A Comparison of Income, Income Sources, and Expenditures of Older Adults by Educational Attainment

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The economic status of older adults differs by their level of formal education. Using the 1990 Consumer Expenditure Survey, the income, expenditures, and educational attainment of adults 65 years and older were analyzed. Nearly half (48 percent) of household heads 65 years and older had less than a high school education. Those with lower educational attainment had less annual income than those with higher levels of education. Income level increased as educational level increased. The least educated group of older adults received 62 percent of their income from Social Security; the most educated group received 32 percent. Those with higher levels of education were more likely to be employed and received 27 percent of their income from earnings, compared with 19 percent among those with 8th grade or less education. Older adults spent over half of their total expenditures on housing and food. The group with the lowest educational level spent more on health care than on transportation. The group with the highest educational level spent more on transportation than on food or health care.

Education directly and indirectly affects economic well-being at every stage of life. Education enables people to develop marketable skills, obtain better jobs, save to meet future needs, and be aware and avail themselves of community services.

Older adults with less schooling likely have lower income levels than those with more education. They likely had lower incomes during their working

years. They may have been less able to save and may have been less aware of the need to save for retirement years. With less education, they are likely to have fewer opportunities for part-time or full-time employment when they are 65 or older. Also, less educated older adults may be less likely to obtain community services that could alleviate their financial situation.

Previous studies have found that for those in the labor force, educational level does affect income level (1,4,5).

¹Visiting Professor, Family Economics Research Group.



Educational attainment by age, 1990



This impact has been increasing. In 1963, those with a college degree earned about 2.1 times as much as those without a high school diploma; by 1987, the ratio was more than 2.9 (1).

The purpose of this study was to determine the extent to which economic well-being **after** age 65 is associated with educational attainment.

Source of Data

Data for this study are from the interview component of the 1990 Consumer Expenditure Survey (CE), conducted by the Bureau of the Census for the Bureau of Labor Statistics. The CE is an ongoing survey that collects data on household expenditures, income, and major socioeconomic and demographic characteristics. A national sample of

consumer units² is interviewed once each quarter for five consecutive quarters; the first interview is used only for bounding purposes. Using a rotating sample design, about one-fifth of the sample is replaced each quarter. The 1990 CE, with a response rate of 86 percent, contains information from about 20,000 interviews. Income data are annual, and quarterly expenditure data are multiplied by four to provide estimates of annual expenditures. Data are weighted to represent the U.S. noninstitutionalized population. For

²A consumer unit consists of either: (1) all members of a particular household who are related by blood, marriage, adoption, or other legal arrangement; (2) two or more people living together who pool their incomes to make joint expenditure decisions; or (3) a person living alone or sharing a household with others or living as a roomer in a private home or lodging house or in permanent living quarters in a hotel or motel, but who is financially independent. To be considered financially independent, at least two of the three major expense categories (housing, food, and other living expenses) have to be provided by the respondent.

this study, only consumer units who were complete income reporters³ were selected. Findings are based on responses from 3,715 consumer units with reference persons 65 years and older.

Characteristics of Older Adults by Educational Level

Levels of educational attainment were grouped into four categories. As shown in the figure, reference persons 65 years or older were less educated than younger adults. Almost 29 percent had 8 years or less of education, 19 percent had some high school, 27 percent had graduated from high school, and 25 percent had attended college and may have graduated. Table 1 shows the characteristics of households headed by adults 65 years and older by educational levels.

³Complete income reporters are respondents who provide values for major sources of income such as wages and salaries, self-employment income, or Social Security income. They may not have provided a full accounting of income from minor sources.

Table 1. Characteristics of households headed by adults 65 years or older, by educational levels, 1990

Characteristic	All 65+	8th grade or less	Some high school	High school graduate	Any college
Number of households (weighted, in thousands)	17,850	5,156	3,429	4,841	4,423
			<u>Percent</u>		
Before-tax household income					
Under \$10,000	36.7	56.8	33.0	34.2	18.8
\$10,000 - \$14,999	19.6	18.5	23.8	19.8	17.3
\$15,000 - \$19,999	12.4	10.8	16.1	13.0	10.6
\$20,000 - \$29,999	16.2	8.7	17.1	17.6	22.8
\$30,000 and over	15.1	5.2	10.0	15.4	30.5
Family type					
Husband/wife families	44.1	38.8	47.5	43.3	48.6
Other families	10.9	11.5	14.8	8.4	9.9
Single males	10.2	15.4	7.6	8.3	8.2
Single females	34.8	34.3	30.1	40.0	33.3
Geographical location					
Urban	83.4	78.7	81.1	87.3	86.5
Rural	16.6	21.3	18.9	12.7	13.5
Housing tenure					
Homeowner without mortgage	62.7	63.0	64.6	61.8	62.0
Homeowner with mortgage	15.1	8.6	15.9	14.9	22.2
Renter	22.2	28.4	19.5	23.3	15.8
Reference person					
Race					
Non-Hispanic White and other	88.0	77.7	86.6	93.2	95.3
Non-Hispanic Black	9.1	15.4	11.9	5.6	3.3
Hispanic	2.9	6.9	1.5	1.2	1.4
Age (years)					
65 - 69	29.1	18.9	29.9	33.8	35.0
70 - 74	26.9	21.8	29.2	31.4	26.2
75 - 79	22.0	25.2	20.4	21.9	19.6
80 and older	22.0	34.1	20.5	12.9	19.2
Marital status					
Married	45.9	41.4	48.5	44.1	50.9
Widowed	40.3	46.1	35.9	43.9	32.9
Divorced/separated	9.7	8.8	11.2	9.0	10.6
Never married	4.1	3.7	4.4	3.0	5.6
Employment status					
Reference person employed	17.5	11.0	13.6	22.1	23.1
Others only employed	13.0	13.6	16.9	11.1	11.5
No earner	69.5	75.4	69.5	66.8	65.4

Income

For all older adult households, 37 percent had an annual income of less than \$10,000.⁴ Fifty-seven percent of those with 8 or less years of education and 19 percent of those with college experience indicated an annual income of less than \$10,000. Households of older adults with college experience clearly had higher annual incomes with more than 30 percent of them reporting an annual income of \$30,000 and over. These findings corroborate those reported in previous studies—that individuals with more education are more likely to have higher incomes.

Family Type

Overall, 44 percent of the older adults were husband-wife families, about 35 percent were single females, and 10 percent were single males. Those with college experience were more likely to be living with a spouse than those with less education. They were younger, and a lower percentage were widowed. Possibly, because of their college experience, these people may have been employed at less hazardous jobs with a lower incidence of job-related accidents, where health-care benefits were available, and preventive health care was supported.

Geographic Location

Overall, most (83 percent) older adults reported living in urban areas. Those with less education were more likely to live in rural areas than those with more education. The rural elderly, as a group, tend to have endured higher levels of poverty, poorer health, and more deteriorated housing than the urban elderly (8). This sustained disadvantaged status likely affects educational attainment. Also, better job opportunities in urban areas may have attracted those with higher educational attainment.

Housing Tenure

Most older adults owned their home; only 22 percent reported renting. At this stage of the family life cycle, it was expected that a large percentage of people would be homeowners without a mortgage: More than 60 percent of older adults at each educational level reported owning without a mortgage.

Although only 15 percent of all older adults were homeowners with a mortgage, 22 percent of those with some college had a mortgage. Few of those with 8 years or less of education (9 percent) were homeowners with a mortgage: They were more likely to be renters—28 percent reported renting.

Race

Overall, 88 percent of the older population were non-Hispanic White, Asian, Native American, and other; 9 percent were non-Hispanic Black; and 3 percent were Hispanic. Of those with any college education, 3 percent were non-Hispanic Black and 1 percent was Hispanic. Of those with 8 years or less of education, 15 percent were non-Hispanic Black and 7 percent were Hispanic.

Clearly, the non-Hispanic Black and Hispanic populations are over-represented among those with lower educational levels. This cohort grew up when there were few opportunities for members of minority populations to obtain a higher education.

Age

Those with less education tended to be older. Twenty-two percent of all older adults in this sample were 80 years or older, but among adults with 8 years or less of education, 34 percent were 80 years or older. This older cohort had a difficult time to continuing their education during the Depression of the 1930's.

Households of older adults with college experience clearly had higher annual incomes with more than 30 percent of them reporting an annual income of \$30,000 and over.

⁴In 1990, the poverty threshold for a family of two with the householder age 65 or older was \$7,906.

Table 2. Income and income sources of households headed by adults 65 years or older, by educational levels, 1990

Income sources	Average income					Percent of income from source				
	All 65+	8th grade or less	Some high school	High school graduate	Any college	All 65+	8th grade or less	Some high school	High school graduate	Any college
Before-tax income	\$18,646	\$12,128	\$16,276	\$18,072	\$28,712					
After-tax income	17,517	11,865	15,624	17,048	26,089					
Social Security and Railroad Retirement	8,357	7,496	8,652	8,370	9,118	45	62	53	46	32
Earnings ¹	4,308	2,298	3,424	3,975	7,702	23	19	21	22	27
Pensions and annuities ²	3,294	1,186	2,488	3,168	6,514	18	10	15	18	23
Interest and dividends ³	2,255	641	1,464	2,176	4,837	12	5	9	12	17
Other ⁴	432	507	248	383	541	2	4	2	2	1

¹Includes wages and salary income; income (or loss) from nonfarm business, farm, and roomers, boarders, rental units.

²From private companies, the military, or government.

³Includes royalties, estates, and trusts.

⁴Includes supplemental security income, unemployment compensation, workers' compensation, veterans' benefits, public assistance or welfare, value of food stamps, regular contributions received.

Marital Status

Overall, 46 percent of the older adults were married, whereas 40 percent were widowed. Those with some college education were more likely than other education groups to be married (51 percent). Those with 8 years of education or less were more likely to be widowed (46 percent). Over one-third of this latter group were 80 years or older, increasing the likelihood of a spouse being deceased.

Employment Status

In 18 percent of the households, the elderly reference person was employed. Employment was more likely if the education level of the elderly reference person was relatively high. Twenty-two percent of those with a high school diploma and 23 percent of those with college experience were employed.

Income Sources and Mean Annual Income

Table 2 shows the average family income before and after taxes and sources of income by educational level of the reference person. The overall average before-tax income reported by people 65 years and older was \$18,646. For those with college experience, average before-tax income was \$28,712—more than twice that of those with an 8th grade or less education (\$12,128).

Sources of income for older adults included Social Security or Railroad Retirement (45 percent of household income), earnings (23 percent), pensions and annuities (18 percent), and interest and dividends (12 percent). Average income from Social Security was \$8,357, from earnings—\$4,308, from pensions and annuities—\$3,294, and from interest and dividends—\$2,255.

Educational attainment was a major predictor of annual income among older adults. Those who had higher levels of education indicated higher incomes from every major source.

At every educational level, however, older adults indicated that Social Security was their major source of income followed by earnings, pensions and annuities, and interest and dividends. The least educated group of older adults was most dependent on Social Security as a source of income. Those with 8 years or less of education reported that 62 percent of their income was from Social Security. This percentage decreased as years of education increased. Those with college experience received 32 percent of their income from Social Security.

The percentage of income received from earnings, annuities and pensions, and interest and dividends each increased as

Table 3. Expenditures of households headed by adults 65 years or older, by educational levels, 1990

Expenditures	Average expenditures					Percent of total expenditures				
	All 65+	8th grade or less	Some high school	High school graduate	Any college	All 65+	8th grade or less	Some high school	High school graduate	Any college
Total expenditures	\$16,977	\$11,777	\$13,873	\$17,137	\$25,270					
Housing	5,627	4,215	4,509	5,765	7,991	33	36	33	34	31
Food	3,184	2,456	3,011	3,189	4,161	19	21	22	18	16
Transportation	2,793	1,510	2,168	3,006	4,538	16	13	16	17	18
Health care	2,092	1,922	1,678	2,008	2,702	12	16	12	12	11
Entertainment	650	278	513	647	1,193	4	2	4	4	5
Apparel and services	603	327	452	687	949	4	3	3	4	4
Retirement	499	201	285	493	1,020	3	2	2	3	4
Cash contributions	267	127	135	159	649	2	1	1	1	3
Life insurance	259	173	195	278	390	1	1	1	2	2
Other	1,003	568	927	905	1,677	6	5	6	5	6

years of education increased. Overall, 23 percent of income in households headed by adults 65 years and older was derived from earnings. For those with an 8th grade or less education, 19 percent of their income came from earnings, compared with 27 percent for those with some college education. People 65 years and older with college experience may have more opportunities for earnings or may enjoy their work more than those with less education. Moehrle (6), in a study of elders 62 to 74 years of age, found that people with more education (and higher earnings) may postpone retirement because the opportunity costs of retirement are greater. Burtless and Moffitt (3), using data from the Social Security Administration's Retirement History Survey of 4,600 men, found that men with some college education not only retire about 1 year later than other men but also have greater post-retirement hours of work.

Eighteen percent of income received by older adults came from a pension or an annuity. Those with an 8th grade or less education had less of their income from pensions or annuities (only 10 percent), compared with those with college experience (23 percent). The type of job held by an individual determines, to a great extent, whether or not he or she will receive a pension or annuity—as well as how much it will be worth. Those with college experience were more likely to have worked in jobs where they would have pension and annuity plans, compared with those with less education.

Twelve percent of the income of older adults was in the form of interest or dividends. Of those in the group with least education, only 5 percent of their income came from interest and dividends, compared with 17 percent for those with college experience. This suggests that as educational attainment rises, the ability or inclination to save and invest also rises.

Allocation of Expenditures

Table 3 shows the allocation of expenditures of consumer units with household heads 65 years and over. Total household expenditures for all older adults, 65 years and over, averaged about \$17,000 and ranged from less than \$12,000 for those with an 8th grade or less education to over \$25,000 for those who had attended college.

The higher the education attainment of older adults, the more income they have to spend. For each expenditure (except health care), the amount spent increases with years of education. Spending patterns (percentage of total expenditures), however, vary. Expenditures for housing, food, transportation, and health care accounted for 80 percent of total expenditures for all older adults. For those with 8 years of education or less, these four expenditures accounted for 86 percent of total expenditures, compared with 83 percent for those who had some high school education, 81 percent for those who had completed high school, and 76 percent for those with some college education.

Housing

Overall, older adults spent one-third of their total expenditures on housing. Older adults with educational attainment of 8th grade or less spent the largest percentage (36 percent) of their total expenditures in the housing area, whereas the group with some college education spent the lowest percentage (31 percent).

Food

Food accounted for about one-fifth of older adults' total expenditures. The two less educated groups spent larger percentages of their total expenditures on food than did the two more educated groups. The group with college experience spent the smallest percentage of their total expenditures (16 percent) on food.

Transportation

Older adults spent 16 percent of their total expenditures on transportation. The share of total expenditures attributed to transportation increased as educational level increased. The least educated group spent 13 percent for transportation, whereas the group with the most education spent 18 percent. This latter group also spent a higher amount for transportation than for any other item except housing. This expenditure likely reflects greater amounts of travel among those with college experience.

Health Care

Overall, older adults spent 12 percent of their total expenditures on health care. Older adults who had the least amount of education (8 years or less) spent a higher percentage (16 percent) of their total expenditures on health care than those with more education, probably reflecting their higher average age: one-third were 80 years or older. This group also spent a larger dollar amount for health care than those with some high school education, even though total expenditures were less. These results support those reported by Burtless (2): that less educated older people may have more health problems than those with

more education. Also, less educated older adults are less likely to have insurance.

Conclusions and Implications

Education is related to the economic well-being of individuals during their later years. Using the 1990 Consumer Expenditure Survey, income, income sources, and expenditures of households headed by people 65 years and older were analyzed by educational level. Findings show that even in the later stages of the family life cycle, the higher the educational attainment, the higher the income.

Since 29 percent of the elderly had 8th grade education or less and an average income of \$12,128, it is clear that substantial numbers of the elderly are not "advantaged." Also, those older adults with lower educational levels

spent proportionately more on housing, food, and health care than did those with higher educational levels. Therefore, many of their financial decisions concern basic needs. These older adults may particularly benefit from financial counseling and other services.

Because almost half of the older adult reference persons have less than a high school education, there are implications for educational and assistance programs: to decrease barriers that may make it harder for some older adults to make wise financial decisions, and to provide materials on finances and services that are written clearly and concisely. Also, social service professionals should ensure that procedures for obtaining services and financial counseling are easy to understand so that the most needy elderly can avail themselves of these types of services.

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Impact of Children's Employment on the Economic Status of Two-Parent Families¹

By Mary Ann Noecker Guadagno
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Family Economics Research Group

This article examines family economic status by considering children's employment status in one- and two-earner, two-parent families. Using data from the 1990 Consumer Expenditure Survey (CE) and 1987–88 Survey of Families and Households, this study describes and compares two-parent families by family employment status. CE data show that children were more likely to work in paid employment when both parents, rather than one parent, were employed. Children's mean annual earnings in two-earner, two-parent families were \$2,611, compared with \$2,704 in one-earner, two-parent families. Although a majority of children ages 14 to 19 were employed, the impact of children's employment on family income and expenditures appears to be minimal. Descriptive results from the Survey of Families and Households indicate that about 47 percent of children ages 12 to 18 in two-parent families received an allowance and about 62 percent reported earned income. Of those children with allowances, the average monthly allowance was \$35. Results suggest that, unlike in previous generations, children in two-parent families are not employed out of economic necessity. Children may be employed, at least in two-parent families, for a more social-psychological reason than for an economical one.

Most studies of family economic status assess the income and expenditures of adult family members. A better understanding of children's role in earning and spending money is needed to help prepare educators, policymakers, and families for social and economic challenges of the 1990's.

Research in this area is important because national statistics (2) show that children are worse off than their parents' generation on several important dimensions of physical, mental, and emotional well-being. A recent literature review by Fuchs and Reklis (2) shows

increasing percentages of families without adult males, increasing rates of teenage suicide and pregnancy, declining test scores, and rising rates of poverty among families with children.

Families in the childbearing and child-rearing life cycle stages are frequently economically vulnerable (1,2). One way families may respond to high demands on family resources is by generating additional income through the employment of both spouses or older children (3,4).

Government data provide insight into employment patterns and the economic status of two-parent families. Data from the Current Population Survey (CPS) showed that 95 percent of all husbands and 73 percent of all wives were

¹Based on a paper presented at the XVIIth World Congress of the International Federation of Home Economics in Hanover, Germany, July 28, 1992.

Children's contribution to family income ... was small.

employed in 1987 (10). A majority of employed husbands (93 percent) and wives (68 percent) worked full time.² When a wife worked full time, mean family earnings were \$41,764, compared with \$34,569 when she worked part time and \$31,008 when she was not employed (10). In 1992, nearly half (46 percent) of the 13 million children ages 16 to 19 were in the labor force (12). A majority of those children worked part time (73 percent) (12).

The literature on children's income relative to family income is sparse (5,8). The Bureau of the Census estimated that 1989 median earnings for 15- to 24-year-olds were \$6,313 for males and \$4,739 for females (14). A university study (6) estimated aggregate children's income at about \$9 billion in 1989. Yet, comparisons of children's income are difficult to make because informal money transfers within the family, such as allowances and gifts, obscure the money source and are difficult to count (5).

A study of families in the United Kingdom (5) showed that children receive income from three major sources: Parental pocket money or allowances, earnings from part-time jobs such as paper routes, and gifts from family and friends. Hill (5) concluded that by the age of 5 to 7, a majority of children are directly involved in the distribution and spending of a small percentage of family income.

The literature on children's expenditures and their influence on family purchases is increasing. McNeal (6) cited four reasons for this increase. First, families are smaller so the influence of each child is greater. Second, rapid growth in the number of one-parent families increases the number of children doing their own shopping. Third, families have more money to spend on children

due to delayed childbearing. Fourth, since both parents work in nearly 70 percent of households with children, children are more likely to participate in family purchase decisions.

McNeal (6) estimated that children influence more than \$132 billion of consumer spending for children's items such as snacks, toys, electronics, clothes, and hobby supplies; housing items such as furniture, televisions, stereos, and yard equipment; and family items such as vacations, automobiles, food, and recreation. O'Hare (7) found that households with children spend more on all products and services—especially housing, food, and transportation.

This study describes the economic status of two-parent families by considering the employment status of parents **and** children. Family employment status is defined in this paper as the collective employment status³ of one or both parents, an oldest child between age 14 and 19, and other children in the family. To examine the effect of children's employment on the economic status of one- and two-earner, two-parent families, comparisons of family income and expenditures are made for families with and without employed children.

The purpose of this paper is to approximate the percentage of family income earned by children in two-parent families and to examine whether family income and expenditures differ based on family employment status. Findings will provide insight into two-parent family income and expenditure differences when two parents are employed, one parent is employed, two parents and an oldest child are employed, and one parent and an oldest child are employed.

²Full time was defined by CPS as working 35 hours or more per week for a majority of weeks worked during the year. Part time was defined as working less than 35 hours per week for a majority of weeks worked during the year (13).

³Employed included all persons who worked for money at some time during the year or who worked 15 hours or more without pay in a family-operated enterprise. Nonemployed included all persons who did not work for money during the year (11).

Data Sources

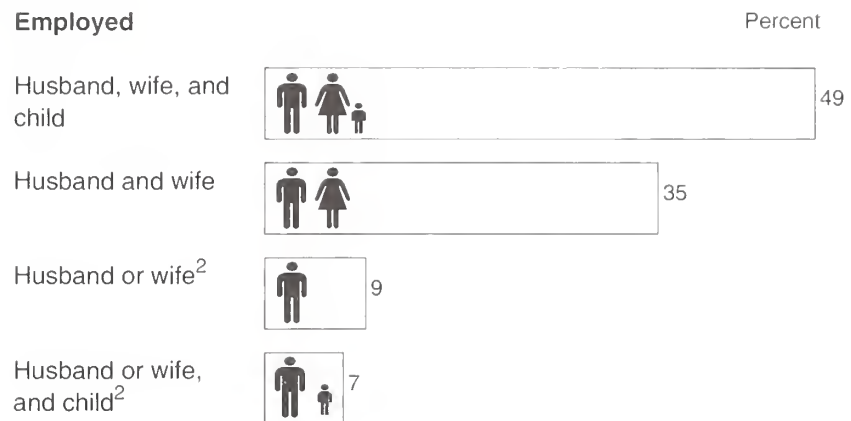
Data for this study are from the interview component of the 1990 Consumer Expenditure Survey (CE). CE is an ongoing survey administered by the Bureau of the Census for the Bureau of Labor Statistics (BLS). Data collected include household income, expenditures, and demographic characteristics. A national sample of consumer units⁴ is interviewed once each quarter for five consecutive quarters; the first interview is used for bounding purposes. Using a rotating sample design, about one-fifth of the sample is replaced each quarter. Each year of CE data contains information from about 20,000 quarterly interviews representing an average of 82.2 million consumer units. The reference period for income data is 12 months before the income interview, whereas expenditure data are collected for the previous 3 months. All families were complete income reporters.⁵

Estimates of children's income, separate from family income, were available. Unless otherwise noted, children's income refers to **earnings** outside the home. Unfortunately, children's expenditures cannot be determined with CE data. Thus, expenditure estimates include expenses of all family members. Quarterly expenditure data were multiplied by four to provide annual expenditure estimates.

⁴A consumer unit consists of either: (1) all members of a particular housing unit who are related by blood, marriage, adoption, or other legal arrangement; (2) two or more people living together who pool their incomes to make joint expenditure decisions; or (3) a person living alone or sharing a household with others or living as a roomer in a private home or lodging house or in permanent living quarters in a hotel or motel, but who is financially independent. To be considered financially independent, at least two of the three major expense categories (housing, food, and other living expenses) have to be provided by the respondent.

⁵Complete income reporters are respondents who provide values for major sources of income such as wages and salaries, self-employment income, or Social Security income. Complete income reporters may not have provided a full accounting of income from minor sources.

Figure 1. Family¹ employment status, 1990



¹Two-parent families with oldest child age 14 to 19.

²Parent not employed was a homemaker, student, or retired.

Weighted n = 5.9 million families.

Data may be weighted to obtain estimates of the U.S. noninstitutionalized population.

For the present analysis, four groups of two-parent families with an oldest child between ages 14 and 19 were identified from CE data: Group 1—one parent employed, oldest child employed ($n=97$;⁶ Group 2—one parent employed, oldest child not employed ($n=122$); Group 3—two parents employed, oldest child employed ($n=632$); and Group 4—two parents employed, oldest child not employed ($n=468$) (figure 1).

Children between the ages of 14 and 19 were selected for analysis. The lower age limit in this study was based on the assumption that children in this age group were legally employable in most States. The upper age limit was selected for study based on assumptions that most children remain financially dependent on their parents up to 1 year after completing high school. Although the age limits selected for study are

arbitrary, the upper age breakout conforms with employment status tables produced by the U.S. Department of Labor (12).

Excluded from analysis were a small percentage of two-parent families with a parent who could not work due to illness, disability, or inability to find a job. This situation was not considered permanent. That is, parents were not able to work because of mitigating factors—health or labor force obstacles; they had not exercised free choice to stay at home. Notably, mean family income for the excluded group was significantly lower than income in the other families.

Furthermore, only two-parent families with an oldest child age 14 to 19 and living with both parents were selected for analysis. Sample selection criteria were chosen to ensure sample homogeneity, important for interpreting study results.

⁶Unweighted number of families.

Thus, this study does not include two-parent families with an oldest child age 19 or younger living outside the family home (such as a college student) or those with a nonemployed oldest child age 19 or younger and employed younger children.

The final sample was weighted to represent the noninstitutionalized population of 3.3 million two-parent families with an employed oldest child age 14 to 19, and 2.6 million comparable families without an employed oldest child.

Family Employment Status: One Parent Employed—With and Without Employed Children

Family Characteristics

Slightly less than half (44 percent) of the two-parent families with one employed parent had an employed child or children (table 1). Most (92 percent) of the children worked part time. There were no noticeable differences in family size or housing tenure for one-employed-parent families with and without employed children. Average family size for both groups was 4.7 members; about 72 percent of both groups were homeowners.

One-employed-parent families with an employed child differed from those without an employed child relative to parent's age, employment status, education, race, and place of residence. A comparison of parents with nonemployed and employed children showed that parents of employed children were slightly younger and were more likely to work full time, fathers were slightly more likely to have completed college, and mothers were more likely to have completed high school or some college. Also, parents with employed children were more likely to be white or urban residents than those without employed children. In contrast, single-earner families without an employed child were more likely to include older parents, parents who were slightly less educated,

Table 1. Characteristics of two-parent families with oldest child age 14 to 19 by family employment status, 1990

Family characteristics	Family employment status			
	One-parent earner		Two-parent earner	
	Child employed	Child not employed	Child employed	Child not employed
Number of families				
Weighted (in thousands)	420	540	2,899	2,086
Mean family size	4.7	4.7	4.1	4.2
Number of earners	2.2	1.0	3.2	2.1
Number of employed children	1.0	0	1.0	0
Number of autos	1.7	1.6	1.9	1.6
Mean father's age	42.5	44.2	43.0	42.1
Mean mother's age	40.2	40.9	40.7	39.7
	Percent			
Employment status				
Oldest child				
Full time	8.4	NA ¹	8.0	NA
Part time	91.6	NA	92.0	NA
Father				
Full time	85.5	82.1	86.9	82.8
Part time	8.9	12.6	13.1	17.2
Not employed/missing	5.5	5.3	0	0
Mother				
Full time	5.4	1.0	51.1	48.9
Part time	.1	3.6	48.2	50.6
Not employed	94.5	95.5	0.7	0.5
Father's education				
Elementary	6.5	13.2	4.1	3.8
Some high school	11.8	14.2	9.9	9.2
High school graduate or some college	53.6	47.7	55.5	54.3
College graduate or more	28.1	24.9	30.5	32.7
Mother's education				
Elementary	11.7	11.8	3.3	3.8
Some high school	12.2	22.6	8.4	15.0
High school graduate or some college	73.1	58.8	68.7	62.5
College graduate or more	3.0	6.8	19.7	18.7
Father's race or origin				
Non-Hispanic White	82.5	75.0	87.9	79.1
Other ²	17.5	25.0	12.1	20.9
Housing tenure				
Own	71.9	71.9	88.2	77.9
Rent	28.1	28.1	11.8	22.1
Residence				
Urban	90.1	82.9	79.4	81.3
Rural	9.9	17.1	20.6	18.7

minority families, or those living in rural areas. Differences between families with and without employed children may be due to economic factors affecting children such as job availability or access to job information, or personal factors such as children's career interests and educational goals.

Family Income

In families with one employed parent, children's contribution to family income was small—\$2,704, on average, or about 5 percent of family income (figure 2).

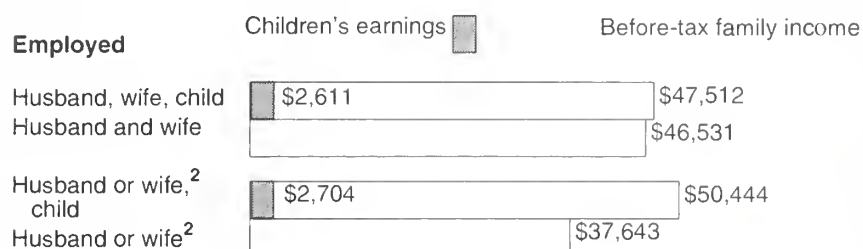
Average before-tax family income for single-earner, two-parent families with employed children was considerably higher than those without employed children, \$50,444 compared with \$37,643 (figure 2). It appears that the more affluent single-earner, two-parent families have children who work.

Expenditures

One-earner, two-parent families with an employed child spent \$6,678 more annually than those without an employed child, \$42,523 compared with \$35,845 (table 2, p. 15).⁷ Single-earner, two-parent families with an employed child spent 3 percentage points more for transportation and retirement and 2 percentage points more on entertainment and miscellaneous expenses than their counterparts without an employed child. Expenditures on clothing were 6 percent of total annual expenditures for both groups. Expenditure shares for families with employed children were lower for housing, food, and educational expenses than for comparable families without employed children. These latter expenditure share differences may reflect the income differential between family groups.

⁷ Only families with children who reported a dollar amount were included in income and expenditure estimates. Results for one-parent earner families with an employed child should be interpreted with caution because of sample size.

Figure 2. Children's¹ earnings and before-tax family income by family employment status, 1990



¹ Oldest child age 14 to 19 in two-parent families. Only families with children who reported a dollar amount were included in the income estimates.

² Parent not employed was a homemaker, student, or retired. Results should be interpreted with caution because of small sample size.

Family Employment Status: Two Parents Employed—With and Without Employed Children

Family Characteristics

Slightly over half (58 percent) of the families with two employed parents had an employed child or children (table 1). As would be expected, most (92 percent) of the children who were employed worked part time. There were no discernible differences in family size, parent's age, education, or location of residence between families with and without an employed child. Families with an employed child had 4.1 members, on average, compared with 4.2 members for those without an employed child. Parents in both groups were predominantly in their early forties and living in urban areas.

Most fathers in both groups worked full time. About half of the mothers in both groups worked part time. However, in families with employed children, mothers were more likely to work full time.

There were pronounced differences in the race and housing tenure of two-earner families with and without employed children. Families with an employed child were more likely to be white and homeowners (88 percent white, 88 percent homeowners), compared with those without an employed child (80 percent white, 78 percent homeowners).

Family Income

Children's contribution to family income with two employed parents was small. Children earned \$2,611, on average, or about 5 percent of family income (figure 2). Average before-tax income for families with employed children was \$47,512, compared with \$46,531 for families without employed children.

Expenditures

Dual-earner, two-parent families with employed children spent slightly more than those without employed children (table 2). On average, family expenditures when children worked were \$2,031 more than when children were not working.

About 62 percent of two-parent families with children ages 12 to 18 reported children received earnings from regular jobs, babysitting, or other employment.

National Survey of Families and Households

Data from the National Survey of Families and Households (NSFH) were used to supplement CE data related to children's allowances and earnings. NSFH is a national multi-stage area probability sample of 13,017 adults from U.S. households in 1987-88. Minorities, single parents, cohabitating parents, newlyweds, and parents with stepchildren are oversampled.

Data were collected using personal interviews and self-report methods by Temple University for the University of Wisconsin-Madison. The response rate was 74 percent. Currently married adults with children between ages 12 and 18¹ were selected for analysis, including 1,212 adults (weighted \bar{n} =14.6 million). A broad range of family issues was examined including life history, living arrangements, marital and parenting relationships, kin contact, and economic and psychological well-being.

Nearly half (47 percent) of the two-parent families studied gave children ages 12 to 18 an average monthly allowance of \$35—about \$9 a week in 1987 (see box table). One quarter of these parents expected regular work around the house; 34 percent paid more for extra jobs.

About 62 percent of two-parent families with children ages 12 to 18 reported children received earnings from regular jobs, babysitting, or other employment (see box table). Only 3 percent of the parents expected children to use earnings for day-to-day family expenses; 22 percent of the parents expected children to save for an education; 28 percent felt children should spend their earnings on regular expenses such as clothing and haircuts; and 50 percent believed children should use their own money for special purchases.

¹Sample selection criteria were slightly different from CE analysis because of methodological differences between studies (9,11).

Percentage of parents¹ reporting allowances, earnings, and selected expenses of children, 1987-88

Children's income and expenses	Percent
Receives allowance ²	47
Includes regular work around house	25
Additional pay for extra jobs	34
Earnings from regular job, babysitting, or other	62
Children employed	
Part time	49
Full time	13
Not employed	38
Parents require earnings used for	
Regular expenses such as clothing and haircuts	28
Future educational expenses	22
Special purchase	50
Day-to-day family expenses	3
Child owns	
Car	20
Motorcycle	3
Moped or motor scooter	2
Child pays for	
Vehicle cost	
Nearly all	34
Some	20
None	46
Maintenance and insurance	
Nearly all	36
Some	28
None	36

¹Includes two-parent families with children ages 12 to 18 (\bar{n} = 1,212; weighted \bar{n} = 14.6 million).

²Mean monthly allowance for children receiving an allowance was \$35.

Only transportation expenses showed pronounced differences when expenditures by two-parent-earner families with and without employed children were compared. Families with employed children spent 4 percentage points more on transportation than those without employed children. The average number of autos and vehicles owned, however, was similar for both groups. Differences in transportation costs seem to be work-related and may also be affected by the number of children of driving age. Employed parents with employed children spent about the same expenditure share as those without employed children for retirement, clothing, education, and other miscellaneous expenses but a slightly lower share for housing, food, and entertainment.

Conclusions and Implications

The primary conclusion that may be drawn from this study was that the effect of children's employment on the economic status of two-parent families appears to be minimal. Regardless of whether one or two parents work in paid employment outside the home, children earn about the same, on average—a small percentage of family income.

Caution in interpreting results seems warranted, however, since the CE does not directly account for allowances or gifts given to children by parents, relatives, and family friends (13). Thus, children's monetary resources and purchasing power are likely to be understated in this paper.

Families with one employed parent and an employed oldest child allocated a higher share of total expenditures for transportation, retirement, entertainment, and miscellaneous items than comparable families without employed children. Higher family transportation costs seem reasonable when children work. However, higher expenditure shares for

Table 2. Expenditures of two-parent families with an oldest child age 14 to 19 by family employment status, 1990

Expenditures	Family employment status			
	One-parent earner		Two-parent earners	
	Child employed	Child not employed	Child employed	Child not employed
Number of families				
Weighted (in thousands) ¹	331	629	2,306	2,678
After-tax income	\$43,297	\$34,933	\$43,234	\$42,398
Total expenditures	42,523	35,845	41,611	39,580
	Percent			
Housing	24	28	27	28
Transportation	24	21	23	19
Food at home	12	15	11	12
Food away from home	3	6	4	5
Retirement	11	8	11	11
Clothing	6	6	6	6
Entertainment	6	4	5	6
Health care	4	3	4	4
Education and reading	2	4	3	3
Life insurance	2	1	2	2
Alcohol and tobacco	1	1	1	1
Other ²	5	3	3	3

¹Only families with children who reported a dollar amount were included in income and expenditure estimates. Results for one-parent earner families with an employed child should be interpreted with caution because of small sample size.

²Includes personal care, cash contributions, and miscellaneous expenses.

retirement, entertainment, and miscellaneous items seem to reflect the relative affluence of this group as well as possible value differences in their orientation towards money.

In contrast, families with two employed parents and an employed child had expenditure shares similar to those without employed children—with one exception, transportation expenses. As would be expected, families with an employed child spent a greater share of total family expenditures on transportation.

Results suggest that, unlike in previous generations, children in two-parent families are not employed out of economic necessity. It appears that children may be employed, at least in two-parent families, for a more social-psychological reason than for an economic one. This supports previous research that parents view money as a useful tool for teaching children ethical and social attitudes about the value of saving, budgeting, and planning (5).

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Trends in Education

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Since 1969, U.S. expenditures for education have accounted for about 7 percent of the Gross National Product. Trends in enrollment indicate that children are starting school at an earlier age and staying in school longer. Data for 1991 show that 78 percent of Americans age 25 and over had completed high school and 21 percent had completed 4 years of college. Two surveys—the Current Population Survey and the Survey of Income and Program Participation—have found a strong, positive relationship between income and education. According to the U.S. Department of Education, public school expenditures, per pupil, averaged \$4,641 in 1989–90 and are projected to reach \$5,814 in 2000–2001. Between 1975 and 1990, charges to students increased at an average annual rate of 14 percent for public colleges and universities and 18 percent for private institutions. Tuition accounts for about one-third of student costs when attending a public college and about two-thirds of costs related to a private college education. Sources of revenue for educational institutions and major sources of student financial aid are also presented.

The importance of education to our Nation is reiterated by concerned citizens in every area of endeavor. The importance of education to the individual and its economic consequences—the strong, positive relationship between educational level and income—have been widely reported. The cost of education affects every American either directly or through income, property, sales, and other taxes. For over 20 years, total U.S. expenditures for education (including public and private elementary, secondary, and higher education) have accounted for about 7 percent of the Gross National Product (16). Also, education is a vast enterprise involving 1 in 4 Americans; most of these (89 percent) are students (60.2 million in 1990), but about 7.3 million people are employed by schools and colleges (16). This article examines enrollment in schools and colleges, educational attainment by demographic characteristics,

expenditures made by educational institutions, sources of educational funds, student costs, and financial aid.

Enrollment

In October 1990, 27 percent of all persons 3 years old and over were enrolled in school, including at least 98 percent of children between ages 6 and 15 (10). Although numbers of children in kindergarten through high school fluctuate with changing demographics, those attending nursery school have increased dramatically since 1964 (figure 1, p. 18). Full-time enrollment in college also rose steadily during this 25-year period.

There were 47.0 million students enrolled in prekindergarten through grade 12 for the 1991–92 school year, according to early estimates published by the National Center for Education Statistics (5). About 5.2 million students (11 percent) were enrolled in private schools. Enrollment is projected to

increase to 50.0 million by 2000. The percentage of students attending private schools is expected to remain at about 14 percent for elementary and 7 percent for secondary levels (12).

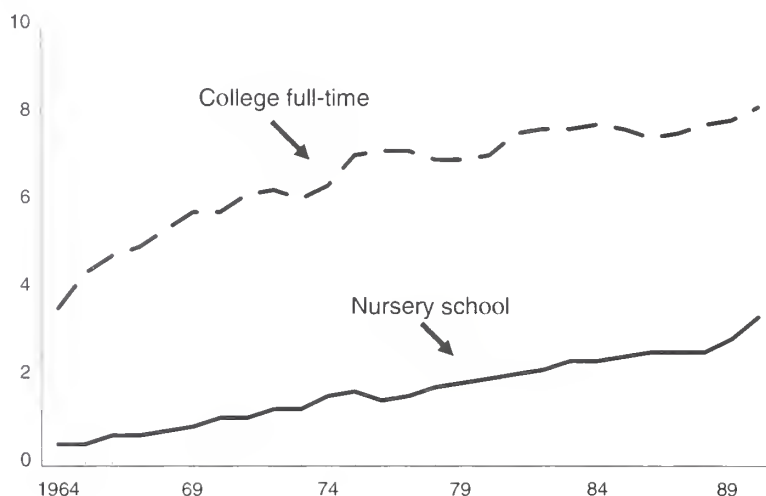
Enrollment at institutions of higher education reached an all-time high in the fall of 1991—nearly 14.2 million students (11). This represents an increase of 17 percent over 1980 enrollment figures (11,12). Since 1979, women have outnumbered men on the Nation's campuses; since 1988, this margin has exceeded 1 million students and in 1991, women were projected to constitute 55 percent of all college students. Also, numbers of women have exceeded those of men in graduate school since 1984 (12). Other trends in full-time versus part-time attendance and public versus private enrollment are shown in figure 2.

Educational Attainment

Americans are staying in school longer. Median school years completed by those 25 years old and over increased from 12.1 years in 1970 to 12.7 years in 1989 (12). Largest increases were found among Black males (9.4 years in 1970 and 12.4 years in 1989) and Hispanic females (8.9 years in 1970 and 12.0 years in 1989). Educational attainment varies greatly among age segments of the population. In 1991, a total of 87 percent of people between the ages of 25 and 44 had completed high school, compared with 49 percent of those 75 years and over (9).

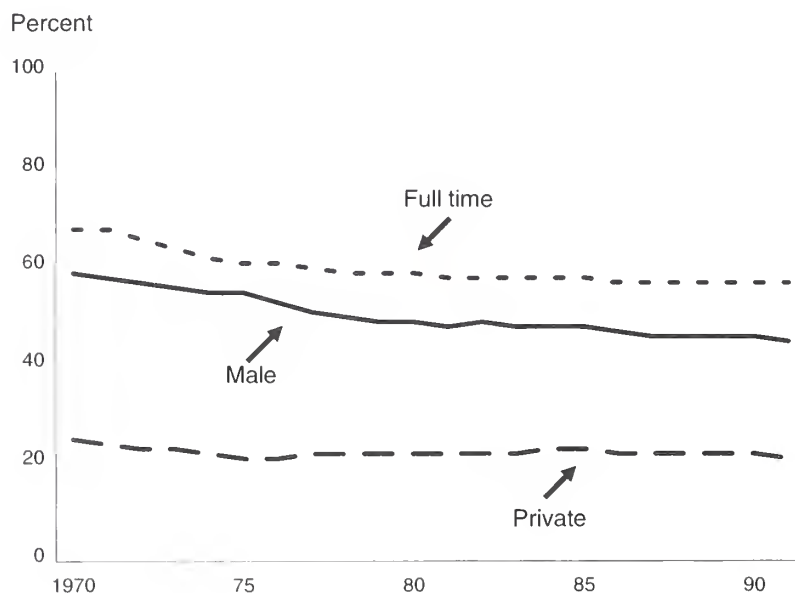
Variation in educational attainment is also apparent when percentages of people 25 years old and over who have completed 4 or more years of college are compared. By race, 22 percent of whites, 12 percent of blacks, and 34 percent of other races had finished at least 4 years of college in 1991. By sex, 24 percent of males and 19 percent of females had completed 4 years of college in 1991 (9).

Figure 1. Full-time college and nursery school enrollment



Source: Kominski, R. and Adams, A., 1992, *School Enrollment—Social and Economic Characteristics of Students: October 1990, Current Population Reports, Population Characteristics, Series P-20, No. 460*, U.S. Department of Commerce, Bureau of the Census.

Figure 2. Characteristics of college students: attendance status, sex, and control of institution



Source: Pluta, M.J., 1991, *National Higher Education Statistics: Fall 1991 (Early Estimates)*, U.S. Department of Education, Office of Educational Research and Improvement, NCES 92-038.

Table 1. Years of school completed, among Americans 25 years and older

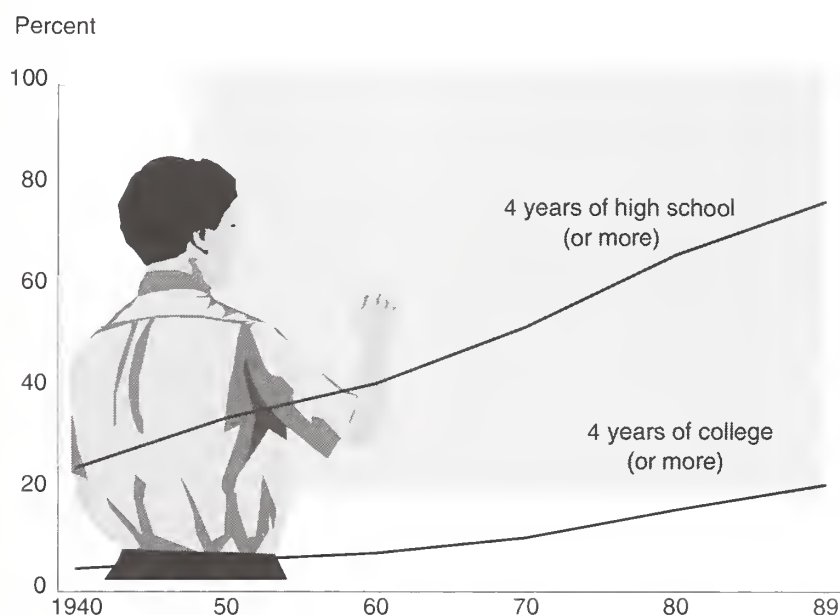
Years	1970	1980	1991
	<u>Percent</u>		
Elementary, 0-8	28.3	18.3	10.6
High school, 1-3	19.4	15.3	11.0
4	31.1	34.5	38.6
College, 1-3	10.6	15.7	18.4
4 or more	10.7	16.2	21.4

Source: U.S. Department of Commerce, Bureau of the Census, 1991, *Statistical Abstract of the United States, 1991*, [111th ed.] from U.S. Census of Population: 1970, Vols. 1 and II; 1980, Vol. 1; and Current Population Reports, Series P-20, No. 462.

Table 1 shows the highest educational level achieved by Americans, age 25 and over, in 1970, 1980, and 1991 (9,12). In 1970, 52 percent had completed high school, 21 percent had attended college for at least 1 year, and 11 percent had completed at least 4 years of college. In 1991, 78 percent had completed high school, 40 percent had attended college for at least 1 year, and 21 percent had completed at least 4 years of college (9). A longer perspective of years in school is shown in figure 3.

Among the high school graduate-age population of 17- and 18-year-olds, the percentage actually graduating peaked in 1970 at 77 percent. Since 1980, when only 71 percent of 17- and 18-year-olds graduated, the proportion has risen slightly (18). The number of people returning to school at an older age or taking the General Educational Development (GED) test has allowed the overall educational level of American adults ages 25 and over to increase steadily (18).

Figure 3. Years of school completed, all persons 25 years and older



Source: U.S. Department of Commerce, Bureau of the Census, 1991, *Statistical Abstract of the United States, 1991*, [111th ed.] from U.S. Census of Population, 1940, 1950, 1960, 1970, and 1980, Vol. 1; and Current Population Reports, Series P-20, Nos. 415, 428, and 462.

Kominski examined income levels by educational attainment using data from the Current Population Survey (9) and the Survey of Income and Program Participation (8). Findings from both sets of data indicate there is a strong, positive relationship between income and education (table 2, p. 20). That is, income levels are higher at each progressively higher level of education. However, at each degree level there were substantial differences in earnings between men and women; mean earnings for men were always higher. Also, mean incomes of whites were significantly larger than that of blacks at all levels.

A study by Adelman (1) based on the National Longitudinal Study of the High School Class of 1972 found that women's academic performance in high school and grade point average in college were superior to men's. Women

Table 2. Mean 1990 income by education attainment, sex, race, and Hispanic origin

Persons ages 18 and over	Total	Less than	High school 4 years	College		
		4 years high school		1 to 3 years	4 years	5 or more years
Total	\$20,393	\$11,045	\$17,072	\$20,864	\$31,256	\$42,880
Male	26,833	14,240	22,521	27,009	40,636	52,429
Female	14,259	7,859	12,406	15,258	21,549	29,477
White	21,126	11,489	17,520	21,364	31,854	43,466
Black	14,624	8,901	13,878	17,553	26,610	33,683
Hispanic origin ¹	14,628	10,281	14,644	18,739	25,911	36,201

¹Persons of Hispanic origin may be of any race.

Source: Kominski, R. and Adams, A., 1992. *Educational Attainment in the United States: March 1991 and 1990, Current Population Reports, Population Characteristics, Series P-20, No. 462, U.S. Department of Commerce, Bureau of the Census.*

entered college directly from high school at the same rate as men and were slightly more likely to earn scholarships. Women were more likely to receive their bachelor's degree in 4 1/2 years, 67 percent compared with 55 percent for men. However, a much higher percentage of women than men (both without children) experienced unemployment between the ages of 25 and 32. Also, women earned more than men in only 7 of 33 major occupations.

Expenditures by Educational Institutions

Elementary and Secondary Schools

For the 1978–79 school year, current expenditures in public schools in the United States totaled \$139.8 billion (constant 1988–89 dollars). By 1989–90, these expenditures were estimated at \$174.4 billion. Projected figures for 2000–2001 are \$237.7 billion (17). On a per pupil basis, current expenditures in constant 1988–89 dollars were \$3,576 in 1978–79, \$4,641 in 1989–90, and \$5,814 (projected) for 2000–2001. Teachers salaries, on average, were (in constant 1988–89 dollars) \$26,609 in 1978–79, \$30,145 in 1989–90, and \$35,541 (projected) for 2000–2001.

Professional salaries in the public school system have increased faster than nonprofessional salaries (figure 4). Fringe benefits, however, have risen even faster. The majority (56 percent) of people who were employed by the public school system were, in 1986, classroom teachers (12). Service workers (including craftworkers and laborers) were next at 17 percent, followed by teacher's aides (9 percent), other professional staff (7 percent), clerical staff (7 percent), and administrators and principals (4 percent).

In 1988, 71 percent of elementary and secondary teachers were female (12). Male teachers were more likely to have at least 20 years' experience, however (30 percent compared with 18 percent for female teachers). Male teachers were also higher paid (\$6,000 more), more likely to receive a school year supplement (for extra curricular activities or extra duties) or a summer school supplement, and to have other employment.

By 1989, a total of 96 percent of all elementary and secondary schools (public, private, and parochial) were using computers for instructional purposes (12). The median number of students per computer was 20—23 in elementary, 18 in the middle grades, and 14 in high school. Instructional computers were located most often in computer labs, except in elementary schools where they were as likely to be in the classroom.

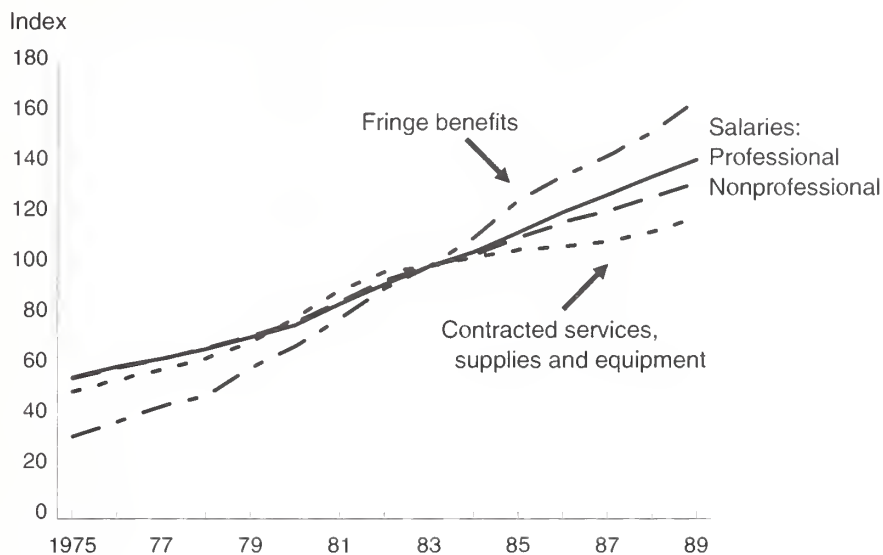
Postsecondary Schools

The Nation had more than 10,000 postsecondary institutions¹ in the fall of 1989, employing over 2.6 million people (2). Of all staff, 72 percent were full time and 63 percent were professional. Of all professional staff, 65 percent were full time and 57 percent were men. Most (82 percent) of the nonprofessionals² worked full time.

¹Postsecondary institutions may offer (1) academic programs that lead to a degree; (2) occupational or vocational programs that train in specific job skills; and (3) continuing professional education where additional skills are acquired in a specific field of study.

²Includes technical, paraprofessionals, clerical and secretarial personnel, skilled craftworkers, and service or maintenance personnel.

Figure 4. Payments by public elementary-secondary schools (1983 = 100)



Since 1979, women have outnumbered men on the Nation's campuses...

Source: U.S. Department of Commerce, Bureau of the Census, 1991, *Statistical Abstract of the United States, 1991*, [111th ed.]

Of all people employed in postsecondary education in 1989, a total of 95 percent were employed in the Nation's 3,589 academic institutions of higher learning³ (2). Among professional employees in colleges and universities (62 percent of all employees), 54 percent were faculty, 26 percent were support or service professionals (such as librarians, accountants, counselors, coaches, and systems analysts), 11 percent were instruction or research assistants, and 9 percent were in administrative, executive, or managerial positions. Fifty-one percent of all those employed in higher education were women.

Instruction accounted for 34 percent of expenditures in public institutions and 26 percent in private institutions in 1988 (7). In public and private institutions, administration⁴ of higher education

accounted for 30 and 29 percent of expenditures, respectively. From 1980 to 1990, academic salaries (full-time faculty, 9 months of teaching) in 4-year public colleges and universities increased by 88 percent, while those in private⁵ institutions increased by 104 percent. Fringe benefits for faculty members increased 151 percent in public and 166 percent in private colleges and universities (12). Figure 5, p. 22, shows how payments by colleges and universities for professional and nonprofessional salaries, fringe benefits and contracted services, supplies, and equipment have increased between 1977 and 1989.

College and university libraries account for about 3 percent of current funds expenditures for institutions of higher education (12). Among the nine universities with over 5 million volumes in 1985, overall annual budgets ranged

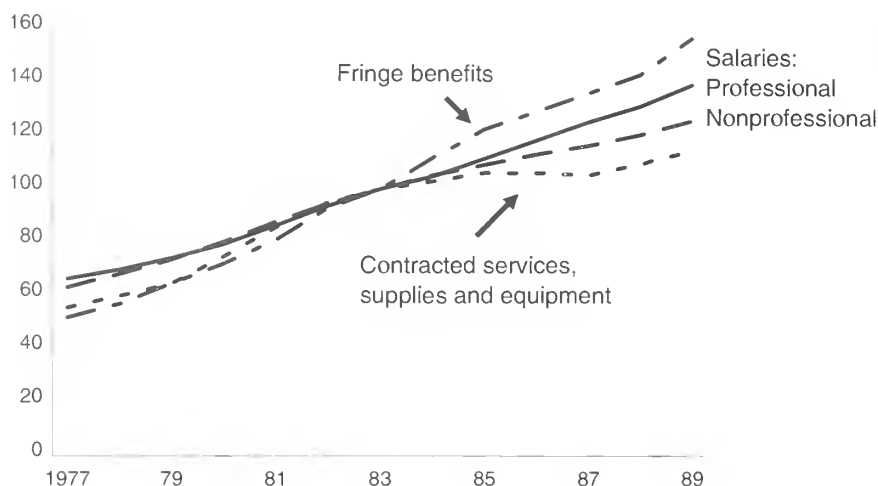
³These colleges and universities are recognized by the Secretary, U.S. Department of Education, as accredited at the college level.

⁴Includes academic support and libraries, student services, institutional support, operation and maintenance of plant, and mandatory transfers.

⁵Excludes church-related colleges and universities.

...there is a strong, positive relationship between income and education...

Figure 5. Payments by colleges and universities (1983 = 100)



Source: U.S. Department of Commerce, Bureau of the Census, 1991, *Statistical Abstract of the United States, 1991*, [111th ed.]

from \$14.8 to \$30.5 million. Salaries and wages accounted for 62 percent of operating expenditures and books, periodicals, audiovisual materials, and other library materials required another 24 percent (12).

Sources of Funds for Education

The Federal Government

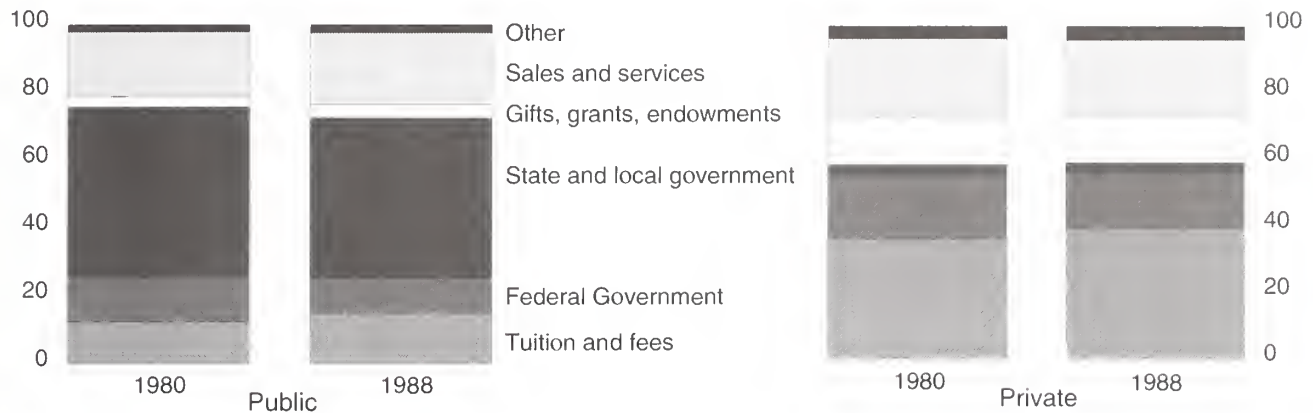
About 10 percent (4) of the Nation's educational costs are borne by the Federal Government. In FY 1991, total Federal funding (elementary, secondary, higher education, research programs at universities, and others) amounted to \$54.6 billion, a decrease of 3 percent since FY 1980 after adjusting for inflation (4). Elementary and secondary education programs received the most money—\$24.4 billion or 45 percent of total funding, higher education received \$13.7 billion (25 percent), and research programs at universities and related institutions were awarded \$12.8 billion (23 percent).

(23 percent). Other education programs (libraries, museums) received \$3.7 billion or 7 percent of total funding.

Various Federal departments and agencies fund educational and related programs. Estimated outlays from the U.S. Department of Education in FY 1991 were \$24.9 billion, of which 41 percent was designated for student financial assistance and guaranteed student loans. Funds from other Federal departments and agencies include:

- U.S. Department of Health and Human Services, \$8.0 billion—26 percent for Head Start, 62 percent for research.
- U.S. Department of Agriculture, \$7.0 billion—81 percent for child nutrition programs.
- U.S. Department of Defense, \$3.5 billion—48 percent for research.
- U.S. Department of Energy, \$2.7 billion—98 percent for research.

Figure 6. Sources of revenue for institutions of higher education, 1980 and 1988



Source: Keough, K., 1991, *Current funds revenues and expenditures of institutions of higher education: Fiscal years 1980–88*, U.S. Department of Education, Office of Educational Research and Improvement.

- U.S. Department of Labor, \$2.6 billion—31 percent for the Job Corps.
- National Science Foundation, \$1.8 billion—88 percent for research.

State and Local Governments

State and local governments provide most of the revenues for public elementary and secondary schools. Since 1979, the State share has been higher than that of the local government (16).

Colleges and universities collectively receive almost one-third of their funds from State and local governments; public institutions receive a larger share—47 percent in 1988 (7), compared with only 3 percent for private institutions.

Private Sources

Colleges and universities are more likely than elementary and secondary schools to be funded by private sources. In 1988, 80 percent of revenues received

by private higher education institutions and 43 percent of those received by public institutions were from private sources (7). As a percentage of total revenues, Federal and State sources of revenue for colleges and universities declined between 1980 and 1988 while tuition and fees increased (7,15) (figure 6).

Tuition and Fees. Tuition and fees have increased as a source of revenue for all higher education institutions since 1980. For private colleges, tuition and fees accounted for 39 percent of funds in FY 1988, compared with 36 percent in 1980; for public colleges, comparable percentages were 15 percent in FY 1988 and 12 percent in FY 1980 (7). Between 1975 and 1990, mean annual tuition increased from \$599 to \$2,006 in public and from \$2,614 to \$10,400 in private institutions (figure 7, p. 24) (12). Since 1982, tuition has increased faster than inflation in both public and private institutions (15).

Voluntary Financial Support. Nine percent of total revenues received by private higher education institutions and 3 percent of those received by public institutions were in the form of voluntary gifts, grants, or contracts in 1988. Individuals, including alumni, contribute almost half of all private gifts, grants, and contracts for colleges and universities (figure 8, p. 24) (12). Business corporations were the second largest source of voluntary support, 22 percent in 1989 (12). Endowment income provided 5 percent of total revenues received by private colleges and universities, but less than 1 percent for public institutions (7).

Student Costs

Trends in tuition and room and board expenses for full-time college students are shown in figure 7, p. 24. Private institutions charge more for each of these costs; tuition prices are about four times greater than those charged by public institutions. As a percentage of total

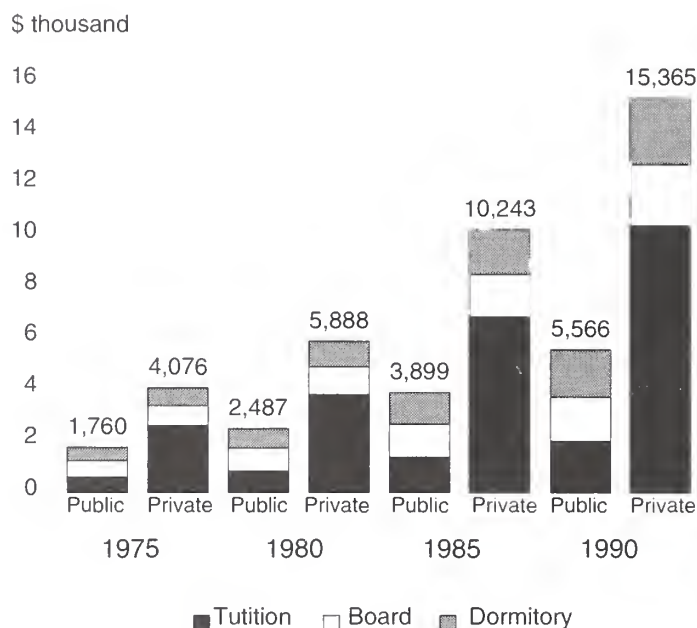
costs to students, tuition accounted for 64 to 68 percent in private and 34 to 36 percent in public institutions during the 1975–90 period (12). Between 1975 and 1990, charges to students increased at an average annual rate of 14 percent for public colleges and universities and 18 percent for private institutions.

As a share of the median family income, college tuition at a private, 4-year institution increased from 16.5 percent in 1976–77 to 22.1 percent in 1987–88. The share of median family income required at a public, 4-year institution increased by 0.7 percent over the same period (15). Two factors that could accelerate future tuition increases are: projected declines in college enrollment and decreasing levels of State appropriations for public institutions, necessitated by a weak economy (15).

A study of 593 **private**, general baccalaureate (undergraduate) institutions was undertaken by the U.S. Department of Education, Office of Research, to determine whether the quality of a college is reflected in the price it charges for tuition and fees (3). The study concluded that, in general, most higher priced private institutions ranked higher in quality⁶ than most lower cost private colleges, but some low-cost colleges outperformed even the most expensive schools. The study recommended that although students and parents are generally justified in judging institutional quality on the basis of price, they cannot be confident that higher prices at one particular institution, as compared with another, represent real differences in quality. Higher prices could indicate inefficiency or a marketing strategy.

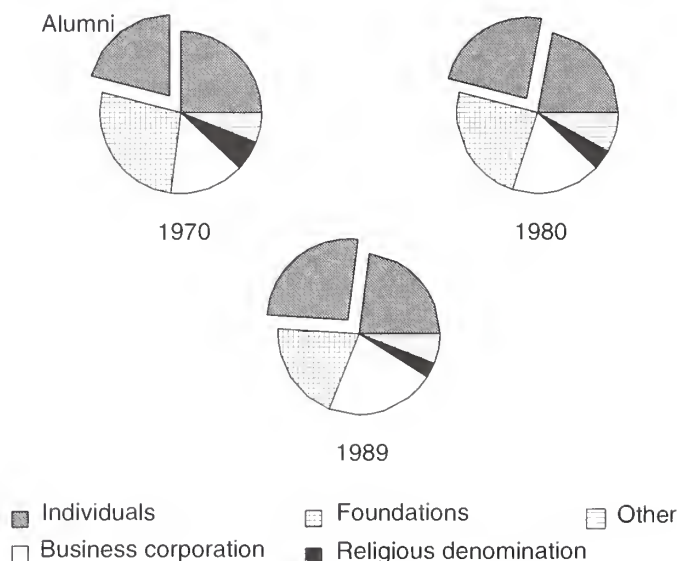
⁶Indicators of quality included resources (financial, physical, academic, and number of student services and facilities), reputation (application rates), selectivity (student ability), and student outcomes (graduation rate, graduate school rate, sophomore retention rate, educational progress).

Figure 7. Average charges per full-time equivalent student, institutions of higher education



Source: U.S. Department of Commerce, Bureau of the Census, 1991, *Statistical Abstract of the United States, 1991*, [111th ed.] from U.S. Department of Education, National Center for Education Statistics.

Figure 8. Voluntary financial support of higher education



Source: U.S. Department of Commerce, Bureau of the Census, 1991, *Statistical Abstract of the United States, 1991*, [111th ed.]

Financial Aid

Between 1980–81 and 1987–88, total student aid from colleges and universities increased from \$2.8 billion to \$4.7 billion (constant 1988 dollars) (15). Data from the Surveys of Recent College Graduates, funded by the National Center for Education Statistics, show that the proportion of college graduates with undergraduate debt has increased from 1 in 3 in 1977 to 1 in 2 in 1986. Real median debt level⁷ for those with debt increased by one-third (in constant dollars) during this period. Because the 1986 Amendments to the Higher Education Act raised loan limits, average debt level is expected to be higher for those graduating after 1986 (14).

Major sources of financial aid from the U.S. Department of Education include grants, loans, and work-study opportunities. The Department publishes a Student Guide (13) that describes each type of financial aid in detail. Information on Pell Grants, Supplemental Educational Opportunity Grants, Perkins Loans, College Work-Study, and Stafford Loans is summarized in the box on p. 26. In 1991, almost 10 million recipients were awarded about \$18 billion in grants, loans, or work-study opportunities (12) (table 3).

The number of students eligible to receive Pell Grants in 1992 is expected to exceed 4 million (6). The U.S. Department of Education had estimated 3.7 million students would qualify. Over \$1 billion of additional funds will be required to meet this demand.

⁷Debt level is the total amount of education loans owed at the time of graduation.

Table 3. Major Federal student financial assistance programs – Number of recipients and funds utilized, by type of programs, selected years

Program	1980	1985	1991, est.
Pell Grants			
Number of recipients (thousands)	2,858	2,910	3,389
Funds used (million dollars)	2,387	3,572	4,889
Average grant (dollars)	835	1,227	1,443
Supplemental Educational Opportunity Grants			
Number of recipients	716	686	696
Funds used	368	410	515
Average grant	513	598	740
Perkins Loans¹			
Number of recipients	813	701	695
Loan funds used ²	694	703	744
Average loan	853	1,003	1,070
College Work-Study			
Number of recipients	819	728	871
Funds used ²	660	656	823
Average annual earnings	806	901	945
Stafford Loans³			
Number of recipients	2,904	3,730	4,125
Loan funds used	6,200	8,839	11,019
Average loan	2,135	2,369	2,671

¹Formerly National Direct Student Loans.

²Includes institutional matching funds.

³Formerly guaranteed student loans. Beginning with 1985, data include activity under the PLUS (Parent Loans for Undergraduate Students), FISL (Federally Insured Student Loans), and SLS (Supplemental Loans for Students) programs.

Source: U.S. Department of Commerce, Bureau of the Census, 1991, *Statistical Abstract of the United States, 1991*, [111th ed.] from U.S. Department of Education, Office of Postsecondary Education, unpublished data.

The 1986 Amendments to the Higher Education Act provide for some flexibility in repaying student loans. Lenders may offer graduated repayment schedules. The Student Loan Marketing Association (SLMA or Sallie Mae), which holds 1 in 3 outstanding student loans, has offered a graduated repayment option since 1988 (14). The principal advantage

to the borrower is that debt burden⁸ will decrease as incomes increase over time, even though payments rise. Also, lenders may consolidate multiple loans, restructure debt, and, if cumulative debt exceeds \$5,000, offer terms of 10 to 25 years for repayment.

⁸Debt burden is the ratio of debt repayment to gross income.

Pell Grant Program—provides funds to every eligible student; maximum award for the 1991–92 academic year was \$2,400. Eligibility is determined by a standard formula, passed into law by Congress, based on information reported on the student aid application. Student must be attending school at least half time.

Supplemental Educational Opportunity Grants (SEOG)—campus-based program administered by the financial aid administrator at each participating school. For undergraduates with exceptional financial need; priority is given to Pell Grant recipients. Maximum award is \$4,000; however, each participating school receives a certain amount for each campus-based program—when that money is gone, there are no more awards for that year.

College Work-Study (CWS)—this campus-based program provides jobs for undergraduate and graduate students who need financial aid. Pay is at least the current Federal minimum wage. Jobs may be on or off campus, involving work in the public interest or related to the applicant's course of study. Work schedule is established by the school.

Perkins Loans—a low-interest (5 percent) loan made through a school's financial aid office; therefore, a campus-based program. The school is the lender, and the loan must be repaid. Maximum amounts are \$4,500 for vocational programs or the first 2 years of a program leading to a bachelor's degree; \$9,000 (cumulative) for those who have achieved third year status; \$18,000 (cumulative) for graduate or professional study. Deferment or cancellation of repayment is the decision of the school. Loans are cancelled upon death or total, permanent disability. Other circumstances can include working as a Head Start, Peace Corps, or VISTA volunteer and, sometimes, as a teacher.

Stafford Loans—low-interest loans insured by the guarantee agency in each State, and also by the Federal Government. The lender is usually a bank, credit union, or savings and loan association but may be the school. Interest rate for new borrowers after July 1, 1988, is 8 percent for the first 4 years of repayment and 10 percent thereafter. Maximum amounts per year are \$2,625 for first- or second-year undergraduate study; \$4,000 for those who have achieved third-year status; and \$7,500 for graduate students. Total debt for an undergraduate may not exceed \$17,250; for graduate or professional study, total debt (including undergraduate accumulated) may not exceed \$54,750. There is a loan origination fee of 5 percent, which helps reduce the Federal Government's cost of subsidizing these low-interest loans. The lender may charge an insurance premium of up to 3 percent of the loan principal. Loans are cancelled upon death or total, permanent disability. In some cases, as an enlistment incentive, the U.S. Department of Defense will repay part of a Stafford Loan. Only the lender can grant deferment or cancellation.

Source: U.S. Department of Education, 1991–92. The Student Guide. Financial Aid from the U.S. Department of Education: Grants, Loans, and Work Study.

Graduates are granted a grace period—usually 6 months—before they must begin repaying their student loans. In addition, deferments are sometimes available (14) if the borrower is:

- enrolled in a graduate fellowship or rehabilitation training program.
- in the military, the National Oceanic and Atmospheric Administration Corps, or a commissioned officer in the Public Health Service—for 3 years.
- a volunteer in the Peace Corps, VISTA, or comparable tax-exempt organization—for up to 3 years.
- a full-time teacher in a shortage area—up to 3 years.
- serving an internship required to begin professional practice—up to 2 years.
- temporarily disabled, or caring for a disabled dependent—up to 3 years.
- unemployed—up to 2 years.
- on parental leave—6 months.
- a mother of preschool children entering (or reentering) the work force at wages within \$1 of minimum wage.

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Age at Retirement

The purpose of this study was to determine the level, direction, and rate of change in the average retirement age of men and women in the United States since the 1950's. Two measures were used to provide a national time series of average ages at retirement over several decades, comparable for both men and women. The first measure, based on administrative records of the Social Security Administration, was the annual mean age of persons receiving initial awards of retirement benefits. The second measure, based on the monthly Current Population Survey,¹ was the labor force participation rates for every fifth year between 1950 and 1990, and projections for 1995 through 2005. These rates were for 5-year age categories from ages 45-49 years to age 75 and over.

In 1950, the mean age of men awarded Social Security retirement benefits was 68.7 years (table 1). By 1989, the mean had fallen to 63.7 years. The decline was almost as great for women, from a mean age of 68.0 years in 1950 to 63.4 years in 1989. Most of the decline had taken place by 1970. Age 62 is the youngest age at which one can collect Social Security retirement benefits. Before 1961 for men and before 1956 for women, the minimum age was 65. Among people awarded Social Security retirement benefits in 1989, nearly half of the men and about three-fifths of the women began receiving their benefits at age 62.

In 1950, about 60 percent of the labor force was covered under the Social Security retirement system. This proportion grew to over 90 percent by 1989.

¹The Current Population Survey (CPS), conducted by the U.S. Bureau of the Census under contract to the Bureau of Labor Statistics, is a monthly survey of some 60,000 households, selected to represent the U.S. population 16 years of age and over.

Table 1. Mean age of persons initially awarded Social Security retirement benefits by sex, 1950-89

Year	Age	
	Men	Women
1950	68.7	68.0
1955	68.4	67.8
1960	66.8	65.2
1965	65.8	66.2
1970	64.4	63.9
1975	64.0	63.7
1980	63.9	63.5
1985	63.7	63.4
1989	63.7	63.4

Source: Social Security Bulletin, Annual Statistical Supplement, 1990, Social Security Administration, 1990, p. 236, table 6B5.

This suggests a risk of bias in the early data in terms of representing the average age of retirement of the entire U.S. labor force.

In 1950, 25 percent of the work force was covered by private or government pension plans. By 1988, the proportion had increased to 46 percent. Although many people who receive pensions are also covered by Social Security, age at first receipt of an employment-provided pension may differ from age at first receipt of Social Security retirement benefits. There is no data set available that combines the two types of benefits to give the age at first receipt of either benefit.

Labor force participation rates for men ages 45-49 through 75 years and over declined at every age category between 1950 and 1990 (table 2). The declines were greater for all age groups 60 years and over than for age groups 45-49 years through 55-59 years. The older the age group, the greater the proportional decline in participation rates.

Table 2. Labor force participation rates for people ages 45 to 49 through 75 years or older, by sex, selected years, 1950–2005

Sex and year	Age group						
	45 to 49 years	50 to 54 years	55 to 59 years	60 to 64 years	65 to 69 years	70 to 74 years	75 years and over
Men							
1950	96.5	95.0	89.9	83.4	63.9	43.2	21.3
1955	97.1	95.7	92.5	82.6	57.0	37.1	19.4
1960	96.9	94.7	91.6	81.1	46.8	31.6	17.5
1965	96.1	95.0	90.2	78.0	43.0	24.8	14.1
1970	95.3	93.0	89.5	75.0	41.6	25.2	12.0
1975	94.1	90.1	84.4	65.5	31.7	21.1	10.1
1980	93.2	89.2	81.7	60.8	28.5	17.9	8.8
1985	93.3	88.6	79.6	55.6	24.5	14.9	7.0
1990	92.3	88.8	79.8	55.5	26.0	15.4	7.1
Projected ¹							
1995	92.0	88.8	79.4	54.7	26.6	15.4	7.4
2000	91.8	89.0	79.2	54.2	27.3	15.6	7.3
2005	91.6	88.8	78.8	53.3	27.9	15.5	7.2
Women							
1950	39.9	35.7	29.7	23.8	15.5	7.9	3.2
1955	45.8	41.5	35.6	29.0	17.8	9.2	4.0
1960	50.7	48.7	42.2	31.4	17.6	9.5	4.4
1965	51.7	50.1	47.1	34.0	17.4	9.1	3.7
1970	55.0	53.8	49.0	36.1	17.3	9.1	3.4
1975	55.9	53.3	47.9	33.2	14.5	7.6	3.0
1980	62.1	57.8	48.5	33.2	15.1	7.5	2.5
1985	67.8	60.8	50.3	33.4	13.5	7.6	2.2
1990	74.8	66.9	55.3	35.5	17.0	8.2	2.7
Projected ¹							
1995	79.1	71.0	58.4	37.9	18.2	8.4	2.5
2000	82.7	74.8	61.9	39.5	19.7	8.5	2.7
2005	85.1	77.6	64.5	40.9	20.7	8.5	2.6

¹Projected rates are unpublished 1991 middle-scenario estimates from the Bureau of Labor Statistics economic projections program.

Source: Gendell, M. and Siegel, J.S., 1992, *Trends in retirement age by sex, 1950-2005*, *Monthly Labor Review* 115(7):22-29.

Table 3. Median age at retirement, by sex, 1950–55 to 2000–05

Period	Age	
	Men	Women
1950–55	66.9	67.7
1955–60	65.8	66.2
1960–65	65.2	64.6
1965–70	64.2	64.2
1970–75	63.4	63.0
1975–80	63.0	63.2
1980–85	62.8	62.7
1985–90	62.6	62.8
1990–95 ¹	62.7	62.6
1995–2000 ²	62.3	62.0
2000–05 ²	61.7	61.2

¹Based on 1990 actual and 1995 projected data.

²Based on projected data.

Source: Estimates were calculated from 5-year age-specific labor force data obtained in the Current Population Survey and life-table survival ratios.

Projections for labor force participation rates for 1995 through 2005 for men indicate little fluctuation from 1990 levels.

Contrary to the pattern for men, the labor force participation rates for women in each 5-year age group from 45-59 years increased about 87 percent from 1950 to 1990. The rates for women over age 60 rose steadily between 1950 and 1970, then declined slightly until 1990. Projections for labor force participation rates for 1995 through 2005 for women indicate increases for all but the oldest age group (age 75 and over).

From the early 1950's to the late 1980's, median age at retirement fell from 66.9 years to 62.6 years for men and from 67.7 years to 62.8 years among women (table 3). Projections

for 1995 through 2005 indicate a further decrease in median age at retirement for both sexes.

Each of the two measures of retirement age used in this study has a number of shortcomings, although they tend to compensate for each other. The Social Security measure does not cover pensions provided in the private sector and by the civil and military services; the labor force measure does. Minimum age at initial receipt of Social Security benefits is currently 62 years; for the labor force measure, the age is often younger—therefore, it is not subject to the upward bias of the Social Security measure. Coverage by Social Security was less widespread in the 1940's and 1950's, so data may not be representative. The Social Security measure is a direct measure based on administrative records for persons age 62 and over; the labor force measure is an approximation because there is no way to determine whether the labor force withdrawal is permanent. Further research should focus on how close: (1) the average age at initial receipt of Social Security retirement benefits is to the average age at initial receipt of any pension; and (2) the net withdrawal rate is to the rate of permanent withdrawal from the labor force.

A decline in the average age at retirement and a gain in longevity tend to raise the economic dependency burden the elderly place on younger cohorts still in the labor force. This tends to make increases in per capita income harder to achieve, even as the cost of income transfers to the elderly rise. Whether it is desirable and feasible to reverse the decline in retirement age, given continued population aging and increases in life expectancy, is an issue that should be addressed.

Source: Gendell, M. and Siegel, J.S., 1992, Trends in retirement age by sex, 1950-2005, Monthly Labor Review 115(7):22-29.

The 1991 Deceleration in Inflation

The 3.1-percent rise in the Consumer Price Index for All Urban Consumers (CPI-U) in 1991 was the lowest rate of increase since 1986. Although sluggish economic conditions tended to dampen inflation, developments for energy and food were major factors in the general slowing of consumer price increases. This deceleration, however, does not necessarily translate into a long-term drop in the underlying rate of inflation.

Because the acceleration of inflation in 1990 was due primarily to a sharp increase in petroleum-based energy prices, the moderation in 1991 was caused largely by a decline in these prices. The oil shortage anticipated during the hostilities in the Middle East never materialized. As prices on world oil markets soared, other oil-producing countries quickly increased production to compensate for the loss of Iraqi and Kuwaiti oil. With increasingly reliable and ample oil supplies, energy prices started to fall.

In 1991, the prices for energy commodities fell 16.1 percent, after rising 35.4 percent in 1990. Except for 1986, when energy commodity prices dropped 30.5 percent, the 1991 decline was the steepest annual decline since 1957.

Food prices rose 1.9 percent in 1991, compared with 5.3 percent in the previous year, their smallest annual increase since 1976. Prices for beef and veal, pork, and eggs declined, whereas prices for fish and seafood, fruits and vegetables, and dairy products rose slightly. Prices for food away from home rose 2.9 percent in 1991, their smallest advance since 1964.

Annual percent change in the Consumer Price Index for All Urban Consumers (CPI-U), selected expenditure categories, 1982-91

Expenditure category	Percent change for 12 months ended December									
	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
All items	3.8	3.8	3.9	3.8	1.1	4.4	4.4	4.6	6.1	3.1
All items less energy	4.2	4.5	4.4	4.0	3.8	4.1	4.7	4.6	5.2	3.9
All items less food and energy	4.5	4.8	4.7	4.3	3.8	4.2	4.7	4.4	5.2	4.4
Energy	1.3	-0.5	0.2	1.8	-19.7	8.2	0.5	5.1	18.1	-7.4
Energy commodities	-5.0	-3.2	-1.8	3.4	-30.5	17.8	-2.3	7.9	35.4	-16.1
Motor fuel	-6.5	-1.7	-2.4	3.1	-30.7	18.7	-2.1	6.8	36.5	-16.0
Fuel oil	-0.7	-10.8	0	5.4	-33.3	17.9	-6.3	19.5	29.9	-19.9
Energy services	14.1	4.1	3.5	-0.6	-3.3	0.2	3.2	2.8	1.5	3.5
Food	3.1	2.7	3.8	2.6	3.8	3.5	5.2	5.6	5.3	1.9
Shelter	2.4	4.7	5.2	6.0	4.6	4.8	4.5	4.9	5.2	3.9
Medical care	11.0	6.4	6.1	6.8	7.7	5.8	6.9	8.5	9.6	7.9
Apparel and upkeep	1.6	2.9	2.0	2.8	0.9	4.8	4.7	1.0	5.1	3.4
College tuition	12.5	9.6	10.1	8.6	7.4	7.0	7.7	8.1	8.2	12.1
Alcoholic beverages	4.0	3.4	2.7	5.5	2.0	3.3	3.9	4.8	4.2	9.9
Tobacco products	20.0	10.1	5.0	7.2	5.9	7.9	9.4	14.7	10.8	11.1

Note: Data are not seasonally adjusted.

Source: Stewart, K.J., 1992, *Energy, food prices helped slow inflation in 1991*, *Monthly Labor Review* 115(5):3-5.

The index for all items excluding food and energy increased 4.4 percent in 1991, compared with 5.2 percent in 1990. Prices for most CPI components within this category, such as shelter, apparel, and medical care, also advanced at slower rates in 1991.

In 1991, residential rent rose 2.9 percent and homeowners' costs were up 3.7 percent, their smallest annual rise since 1968 and 1983, respectively. However, charges for some household goods and services, such as refuse collection, postal rates, and water and sewerage maintenance, accelerated in 1991.

Medical care costs, which have outpaced the overall inflation rate every year since 1980, continued that trend in 1991, increasing 7.9 percent. However, the advance was less than the 9.6-percent rise in the previous year. Prices for physicians' services also rose at a slower rate in 1991.

Prices for apparel and upkeep advanced 3.4 percent in 1991, compared with 5.1 percent in 1990. Prices for alcoholic beverages increased 9.9 percent, the largest rise since 1974. Prices for tobacco and smoking products rose about the same—11.1 percent in 1991 and 10.8 percent in 1990. College

tuition, which had increased between 7.0 and 8.6 percent each year since 1985, rose 12.1 percent in 1991. This represents its sharpest rise since 1982.

Source: Stewart, K.J., 1992, *Energy, food prices helped slow inflation in 1991*, *Monthly Labor Review* 115(5):3-5.

Workers With Low Earnings: 1964 to 1990

The economic well-being of most people in the United States depends on their own earnings or on the earnings of other family members. Wage rates have a direct effect on living standards and can affect labor force and social behavior. Declining wage rates can be a source of economic and social stress.

The Bureau of Labor Statistics and the Bureau of the Census regularly provide information on levels and trends in average or median earnings. Several studies have pointed to recent increases in earnings inequality and in the number of workers with low earnings.

Data from the March supplements to the Current Population Surveys (CPS) of 1965, 1970, 1975, 1980, 1985, 1990, and 1991 were used to provide additional information on: The number of workers with low earnings, changes over time in the prevalence of low earnings, and the characteristics of workers with low earnings. Over the past decade, the likelihood that a year-round, full-time worker would have low annual earnings increased.

The concept of year-round, full-time attachment was developed especially for this study. The category includes people who spent at least 50 weeks during the year at work or looking for work and who either worked 35 hours a week or more or worked fewer hours for nonvoluntary reasons. Within each of these categories, workers are classified as having low earnings if their annual earnings are less than the poverty level for a four-person family. The March supplement to the CPS defines

earnings as money compensation before any deductions. The changes in low earnings thresholds over time reflect price movements.

Even if the income of the worker remains above the poverty threshold, low wages may make it difficult to pay for basic commodities such as housing, education, and medical care. For some workers, the prospect of low wages may lead to a decision to stay out of the labor force if other sources of income, such as assistance payments, are available. For others, low wages may lead to increased hours of work. In addition, low wages affect social behavior in terms of affording

marriage, having children, and establishing an independent household.

In 1964, nearly one-fourth of the Nation's year-round, full-time workers had low annual earnings. The difference between the sexes was large; the rate among males was 16 percent and the rate among females was 45 percent. By 1974, the rate declined to 7 percent for men and 22 percent for women. From 1974 to 1979, the prevalence of low earnings among females declined further, while the rate among men did not change significantly. The recent rise in the incidence of low earnings dates from 1979. Over the 1979 to 1990

Table 1. Year-round, full-time workers with low annual earnings, by age and sex: 1979, 1984, and 1990

Characteristics	1979	1984	1990
	<u>Percent</u>		
Both sexes (years)			
18 - 64	11.6	14.2	17.8
18 - 24	22.9	33.4	43.4
25 - 34	8.8	11.9	18.4
35 - 54	9.9	11.4	13.2
55 - 64	12.0	13.6	16.4
65 and over	28.9	32.1	28.8
Males			
18 - 64	7.3	10.1	13.6
18 - 24	18.1	29.8	39.7
25 - 34	5.7	9.1	14.9
35 - 54	5.3	7.0	8.9
55 - 64	7.3	8.9	11.7
65 and over	25.5	26.5	26.5
Females			
18 - 64	20.0	21.0	24.1
18 - 24	29.4	37.7	48.1
25 - 34	14.8	16.4	23.8
35 - 54	19.5	19.1	19.6
55 - 64	21.7	22.3	24.8
65 and over	36.8	45.4	33.2

Source: U.S. Department of Commerce, Bureau of the Census, 1992, *Workers With Low Earnings: 1964 to 1990, Current Population Reports, Consumer Income, Series P-60, No. 178.*

Table 2. Year-round, full-time workers with low annual earnings, by sex, race, Hispanic origin, household relationship, and education

Characteristics	1990
	Percent
Males	
White	13.0
Black	22.4
Hispanic origin ¹	28.2
Females	
White	23.6
Black	28.5
Hispanic origin	37.0
Household relationship	
Married-couple family	
Husband	9.1
Wife	22.7
Related child	37.9
Female-headed family	
Female head	23.4
Other family member	28.5
Unrelated individual	
Male	17.4
Female	20.2
Education	
White	
Less than 12 years	35.4
12 years	20.4
13 years and over	10.1
Black	
Less than 12 years	40.1
12 years	29.5
13 years and over	14.5
Hispanic origin	
Less than 12 years	48.3
12 years	27.8
13 years and over	14.3

¹Persons of Hispanic origin may be of any race.

Source: U.S. Department of Commerce, Bureau of the Census, 1992, *Workers With Low Earnings: 1964 to 1990*, Current Population Reports, Consumer Income, Series P-60, No. 178.

period, the rate among men rose from 8 percent to 14 percent, the rate among women rose from 20 percent to 24 percent, and the overall rate rose from 12 percent to 18 percent. The 1990 figure of 14.4 million year-round, full-time workers with low annual earnings was higher than the figure for any of the other years included in this study. However, the growth in the absolute number reflects, in part, the growth in the number of workers. Changes in the prevalence of low earnings are apparently caused by structural or long-term factors rather than cyclical factors.

The likelihood of receiving low earnings has increased since 1979 for all age groups below age 65 (table 1). In 1990, year-round, full-time workers between the ages of 18 and 24 had the highest rate—43 percent received low earnings. The lowest rate—13 percent—was reported by those between the ages of 35 and 54.

In 1990, among workers classified by race, ethnicity, and sex, White males had the lowest probability of receiving low annual earnings, whereas Hispanic females had the highest probability (table 2). When classified by household composition, husbands in married-couple families had the smallest likelihood of receiving low annual earnings.

The proportion of year-round, full-time workers with low annual earnings is strongly influenced by educational attainment. In 1990, this proportion ranged from 10 percent for those with 13 or more years of schooling to 36 percent for those with less than 12 years (not shown). There were some differences among race and ethnic groups within the education categories: In 1990, Hispanic and Black high school graduates had a higher likelihood of having low earnings than White high school graduates.

Most year-round, full-time workers with low annual earnings are not in poverty. A worker with low earnings will not be in poverty if the worker's total family income exceeds the poverty threshold. In 1990, the poverty rate among workers 16 to 64 years of age with low earnings was 13 percent, compared with 27 percent in 1964. The likelihood of a worker with low earnings being in poverty varies somewhat by family relationship. In 1990, 21 percent of husbands with low earnings but only 6 percent of wives with low earnings were in poverty. The difference reflects the greater labor force attachment of husbands. Unmarried women with low earnings were more likely to be in poverty than wives with low earnings.

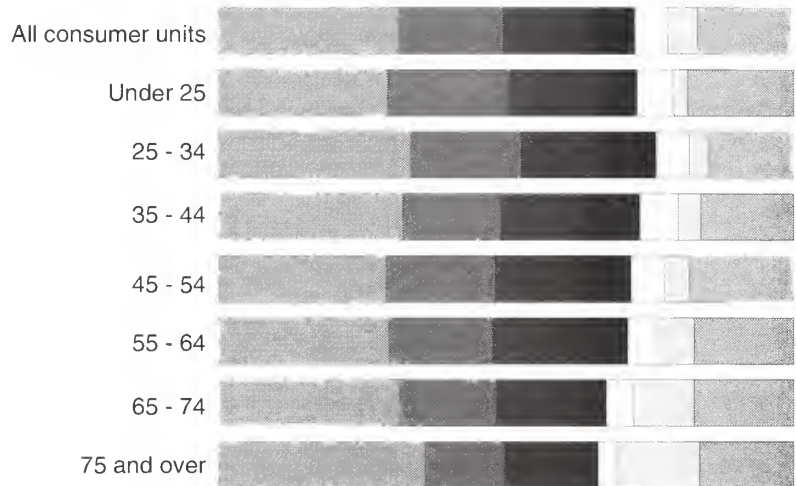
Source: U.S. Department of Commerce, Bureau of the Census, 1992, *Workers With Low Earnings: 1964 to 1990*, Current Population Reports, Consumer Income, Series P-60, No. 178.



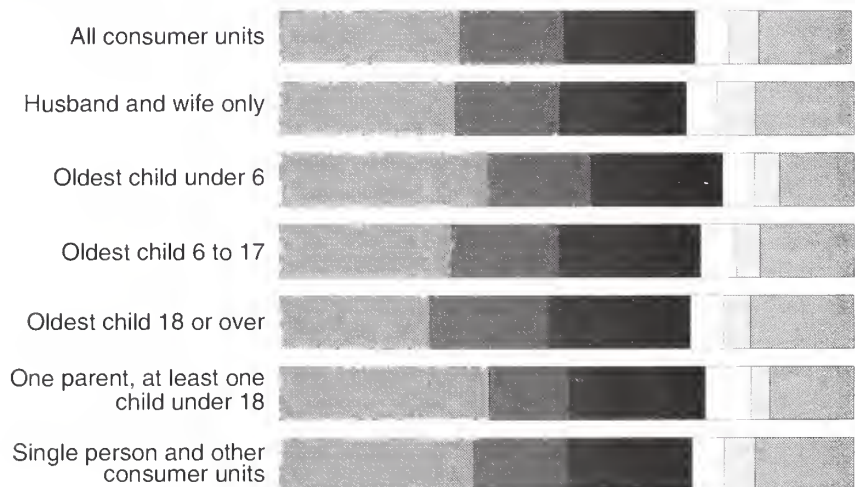
Charts From Federal Data Sources

Distribution of average annual expenditures by selected characteristics, 1990

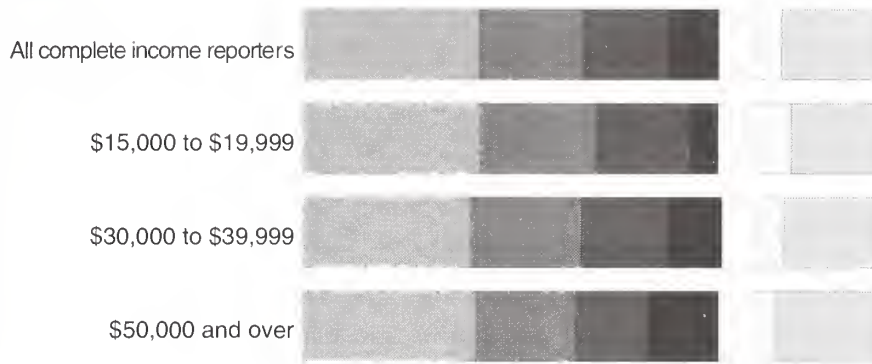
Age of householder



Family type

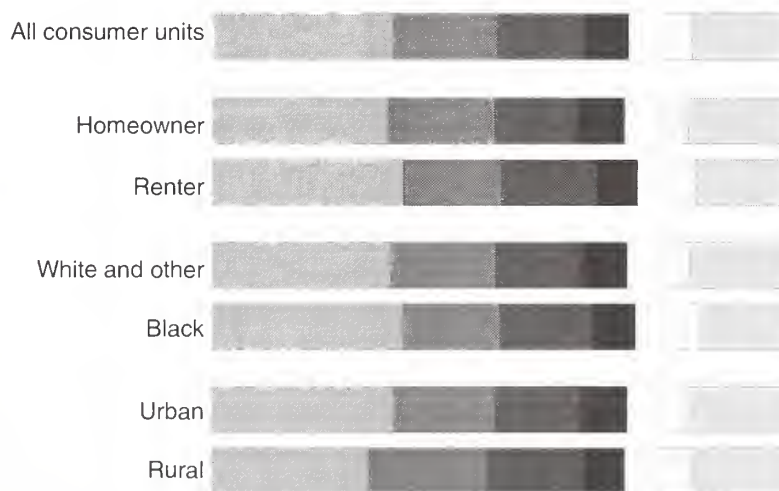


Income



- Housing
- Transportation
- Food
- Pensions and Social Security
- Apparel and services
- Health care
- Other

Housing tenure, race, and urbanization



Source: U.S. Department of Labor, Bureau of Labor Statistics, 1990, Consumer Expenditure Survey.

Recent Legislation Affecting Families

Public Law 102-295 (enacted May 28, 1992)—the Child Abuse, Domestic Violence, Adoption and Family Services Act of 1992 authorizes funds through 1995 for programs dealing with child abuse and neglect, adoption and care of children with disabilities, and the prevention of family violence. The bill funds the following:

- the U.S. Advisory Board on Child Abuse and Neglect;
- State Grants Program to support and improve State Child Protective Service (CPS) systems;
- Community-Based Prevention Grants that focus prevention challenge grants to support community-based programs to assist State children's trust funds in funding local child abuse and neglect prevention activities;
- preventive services for children of homeless families or families at risk of homelessness;
- Child Abuse Treatment Improvement Grants and the establishment of a new program of grants to State and local agencies for treatment services to abused and neglected children in out-of-home care designed to promote reunification with their families;
- emergency child abuse prevention grants under the CPS, particularly for children affected by family members who are drug abusers;
- temporary child care and crisis nurseries grants to provide respite care for families of children with disabilities;
- expansion of the State Grant Program to focus on programs that serve the victims of family violence and their children;
- grants to at least 10 States for the purpose of developing model methods to improve the criminal justice system's response to domestic violence;

- research into areas that include the effectiveness of safety provisions and family violence victim support as ways to eliminate child abuse, and identification of successful child abuse intervention services where both mother and child are abused;
- establishment of a National Clearing-house on Domestic Violence.

The bill outlines the components of the Core Grant Program, an adoption education and training program, the distribution of training materials on adoption, and the Minority Placement Program, which seeks to increase the number of minority children placed into adoptive families. The bill also provides funds for postlegal adoption services for families who have adopted special-needs children.

Public Law 102-314 (enacted July 2, 1992)—The WIC Farmers' Market Nutrition Act of 1992 authorizes grants to State programs designed to provide coupons that may be exchanged for fresh, nutritious, unprepared foods—such as fruits and vegetables—at farmers' markets. Women, infants, and children who participate in the WIC program and are nutritionally at risk are intended recipients. Additional grants will be made to expand the awareness and use of farmers' markets and increase sales at such markets. Grants will be awarded only to States that agree to provide State, local, or private funds for the program in an amount equal to not less than 30 percent of the total cost of the program. The coupon issuance process will be designed to ensure that coupons are targeted to areas with the highest concentration of eligible individuals and the greatest access to farmers' markets. The coupons may be redeemed only by producers authorized by the State to participate in the program.

Public Law 102-318 (enacted July 3, 1992)—extends the Emergency Unemployment Compensation Program through March 6, 1993. The bill was signed 1 day before a July 4 deadline, when workers who had used up their 26 weeks of State benefits would no longer be eligible for Federal emergency benefits. The bill would cost \$5.5 billion over 6 years, providing unemployed workers in 15 States with 26 extra weeks of benefits and workers in all other States and the District of Columbia with 20 extra weeks. Workers who have already exhausted their Federal emergency benefits are not eligible for more. The bill includes a permanent change to the unemployment system, beginning March 7, 1993, which will allow States to release funds based on the total unemployment rate, not just those who qualify for unemployment benefits as is currently the case. As a result, it is expected that Congress will no longer have to vote for emergency benefits.

To pay for the law, three financing provisions were included. Collection of taxes from large corporations that estimate their tax payments on a quarterly basis will be accelerated, a change that would bring in \$800 million. The phase-out of personal exemptions for upper-income taxpayers will be extended, a provision that would raise \$2.7 billion. Finally, pension plan distributions that are not rolled over directly to an Individual Retirement Account will be taxed at 20 percent. This measure would raise \$2.1 billion.

Data Sources

Vital Statistics – Natality, Mortality, Marriage, Divorce

Sponsoring agency: U.S. Department of Health and Human Services

Population covered: All births, deaths, marriages, and divorces occurring in the United States

Sample size: Variable

Geographic distribution: Nationwide for births and deaths; States where marriage and divorce statistics are available.

Years data collected: 1968 to present. The 1989 data should be available for public use in 1993.

Method of data collection: Certificates of births, deaths, marriages, and divorces

Future surveys planned: Ongoing

Major variables: **Natality.** Mother's residence, age of father and mother, birth date and weight, education of parents, marital status of parents, number of prenatal visits, place of birth, race and sex of child, last pregnancy and outcome, and birth order. **Mortality.** Residence of decedent, age at death, sex, marital status, race, cause of death, autopsy performed or not, and State of birth. **Marriage.** Bride's and groom's ages, race, State of residence, marital status, interval from last marriage to present marriage, and number of this marriage. **Divorce.** Husband's and wife's ages at marriage and at separation, race, date of marriage, duration of marriage, number of children under 18, number of living children, custody, and number of previous marriages ending in death or divorce.

Source for further information and data: Reports are published in *Vital and Health Statistics*, Series 20 and 21; supplements to the *Monthly Vital Statistics Report*; and *Vital Statistics of the United States*, Volumes I, II, and III; or contact:

Scientific and Technical Information Branch
National Center for Health Statistics
Presidential Building
6525 Belcrest Road, Room 1064
Hyattsville, MD 20782
(301) 436-8500

Data tapes are available from:
National Technical Information Service
5285 Port Royal Road
Springfield, VA 22161
(703) 487-4650

National Household Education Survey (NHES)

Sponsoring agency: U.S. Department of Education

Population covered: U.S. noninstitutionalized civilian population with telephones

Sample size: The initial Household Screener Survey consisted of 60,300 households. From this sample, 14,000 households with at least one child between 3 and 8 years old were selected for the Early Childhood Education Survey, and 12,570 adults were interviewed.

Geographic distribution: Nationwide

Years data collected: 1991

Method of data collection: Random digit dialing and computer assisted telephone interviewing

Future surveys planned: Annually beginning in 1993, except the Adult Education Survey will only be conducted every 3 years.

Major variables: **Household Screener Survey.** Household characteristics and demographics; education participation and attainment; and preschool and adult education. **Early Childhood Education Survey.** Children's experiences in home-based care, center-based care, at home, and at school. **Adult Education Survey.** Participation in educational activities over the previous 12-month period, including on-the-job training, but excluding full-time attendance in elementary or secondary school.

Source for further information and data: Reports are available from:

U.S. Department of Education
National Center for Education Statistics
555 New Jersey Avenue, NW
Washington, DC 20208-5725

Data tapes are available from:
U.S. Department of Education
Data Systems Branch
555 New Jersey Avenue, NW
Washington, DC 20208-5725
(202) 219-1847/1522

Four data files are available: Preprimary file for children not enrolled in kindergarten; Primary file for children in grades 1 and above; Adult file for adults who participated in education activities; and a Course file for each part-time course reported. For more information on NHES contact: (202) 219-1574 or (202) 219-1767.

Journal Abstracts and Book Summary

The following abstracts are reprinted as they appear in the cited source.

Atkinson, A.M. 1992. Stress levels of family day care providers, mothers employed outside the home, and mothers at home. *Journal of Marriage and the Family* 54(2):379-386.

Individual and family variables were compared between mothers who are family day care providers, mothers employed outside the home, and mothers not employed. The study uses data from telephone interviews with a random sample of 918 mothers of young children. Significant differences were found for mothers' level of stress, education, income, and work hours; for husbands' income, work hours, and time spent actively involved with children; and for number of children. Providers' stress may be influenced by high demands and limited resources from their family situation as well as employment. Sources of stress should be considered when creating family day care training and support programs.

Churaman, C.V. 1992. Financing of college education by single-parent and two-parent families. *Journal of Family and Economic Issues* 13(1):95-113.

The financing of college education by male and female single-parent families and two-parent families is compared. Female single parents are at a significant disadvantage in being able to accumulate funds, but this is partially offset by financial aid. Variables accounting for significant variation in the parents' contribution to student education expenses are: public versus private school, financial aid, parents' saving behavior, students' contribution, race, and family type. The amount of parental contribution is positively correlated with parent net worth, family per capita income, and total student cost; it is negatively correlated with age of the student.

Coughlin, T.A., Liu, K., and McBride, T.D. 1992. Severely disabled elderly persons with financially catastrophic health care expenses: Sources and determinants. *The Gerontologist* 32(3):391-403.

This article describes the sources of financially catastrophic health care expenses among disabled elderly persons. Using a cost-to-income approach and data from the 1981-1982 Channeling Demonstration project, we examined the types of health care costs (hospital, physician and ancillary care, nursing home, and prescription medicine) that contributed to overall expenses. For the Channeling sample, out-of-pocket expenses for prescription medicines and for nursing home care were the principle [sic] source of catastrophic expenses.

Prasad, V.K. and Javalgi, R.G. 1992. Understanding needs and concerns of the elderly regarding Medicare Health Maintenance Organizations. *The Journal of Consumer Affairs* 26(1):47-68.

Medicare beneficiaries, who currently receive health care under a fee-for-service system, present new challenges and opportunities for Medicare-HMOs. Part of the challenge lies in discerning major need dimensions underlying the elderly's choice between standard Medicare and a Medicare-HMO. Although Medicare-HMOs have special features likely to be particularly beneficial to the elderly, they are not greeted without some disquietude. The paper focuses on identifying the major need dimensions and concerns of the elderly in choosing a Medicare-HMO over the traditional fee-for-service Medicare system.

Magrabi, F.M., Chung, Y.S., Cha, S.S., and Yang, S.-J. 1991. *The Economics of Household Consumption*. Praeger Publishers, New York.

This book provides an overview of concepts, theories, and methods related to the study of household consumption. It summarizes the most recent data on consumption patterns and trends, together with factors that influence consumption—population trends, prices, and distribution of resources—and examines how consumption data are used by business, government, and other organizations. The purpose of the work is to give the student an understanding of household consumption patterns, including recent trends in the United States and worldwide, as well as applications to questions of public policy.

Frances M. Magrabi is a professor of consumption economics in the Consumer Sciences Division of the School of Human Resources and Family Studies, University of Illinois at Urbana-Champaign.

Young Sook Chung, Sanghee Sohn Cha, and Se-Jeong Yang received Ph.D. degrees from the University of Illinois at Urbana-Champaign.

Cost of Food at Home

Cost of food at home estimated for food plans at four cost levels, September 1992, U.S. average¹

Sex-age group	Cost for 1 week				Cost for 1 month			
	Thrifty plan	Low-cost plan	Moderate-cost plan	Liberal plan	Thrifty plan	Low-cost plan	Moderate-cost plan	Liberal plan
FAMILIES								
Family of 2: ²								
20 - 50 years	\$49.60	\$62.50	\$76.90	\$95.40	\$214.70	\$270.70	\$333.10	\$413.40
51 years and over	47.00	60.00	73.80	88.30	203.20	259.90	320.00	382.50
Family of 4:								
Couple, 20 - 50 years and children—								
1 - 2 and 3 - 5 years	72.40	90.20	110.10	135.00	313.40	391.00	476.70	585.20
6 - 8 and 9 - 11 years	83.00	106.10	132.30	159.20	359.20	459.60	573.20	689.70
INDIVIDUALS³								
Child:								
1 - 2 years	13.20	16.00	18.70	22.60	57.00	69.40	80.90	98.00
3 - 5 years	14.10	17.40	21.50	25.70	61.20	75.50	93.00	111.40
6 - 8 years	17.30	23.10	28.80	33.60	74.90	99.90	124.90	145.40
9 - 11 years	20.60	26.20	33.60	38.90	89.10	113.60	145.50	168.50
Male:								
12 - 14 years	21.30	29.60	37.00	43.30	92.40	128.50	160.10	187.80
15 - 19 years	22.10	30.60	38.00	44.00	95.90	132.60	164.70	190.80
20 - 50 years	23.70	30.30	37.70	45.60	102.60	131.20	163.40	197.80
51 years and over	21.50	28.70	35.30	42.30	93.00	124.50	153.10	183.30
Female:								
12 - 19 years	21.50	25.60	31.00	37.50	93.10	111.10	134.50	162.50
20 - 50 years	21.40	26.50	32.20	41.10	92.60	114.90	139.40	178.00
51 years and over	21.10	25.80	31.80	38.00	91.70	111.80	137.80	164.40

¹Assumes that food for all meals and snacks is purchased at the store and prepared at home. Estimates for the thrifty food plan were computed from quantities of foods published in *Family Economics Review* 1984(1). Estimates for the other plans were computed from quantities of foods published in *Family Economics Review* 1983(2). The costs of the food plans are estimated by updating prices paid by households surveyed in 1977-78 in USDA's Nationwide Food Consumption Survey. USDA updates these survey prices using information from the Bureau of Labor Statistics, *CPI Detailed Report*, table 4, to estimate the costs for the food plans.

²Ten percent added for family size adjustment. See footnote 3.

³The costs given are for individuals in 4-person families. For individuals in other size families, the following adjustments are suggested: 1-person—add 20 percent; 2-person—add 10 percent; 3-person—add 5 percent; 5- or 6-person—subtract 5 percent; 7- or more-person—subtract 10 percent.

Consumer Prices

Consumer Price Index for all urban consumers [1982-84 = 100]

Group	Unadjusted indexes			
	September 1992	July 1992	August 1992	September 1991
All items	141.3	140.5	140.9	137.2
Food	138.5	137.2	138.0	136.0
Food at home	137.4	135.7	136.9	134.9
Food away from home	141.2	140.8	141.0	138.9
Housing	138.4	138.3	138.6	134.7
Shelter	151.9	151.8	152.3	147.4
Renters' costs ¹	161.7	162.8	163.5	156.2
Homeowners' costs ¹	156.0	155.5	155.8	151.6
Household insurance ¹	143.1	142.6	142.9	138.9
Maintenance and repairs	128.5	128.8	128.1	126.8
Maintenance and repair services	133.1	133.4	133.1	130.7
Maintenance and repair commodities	122.2	122.6	121.3	121.6
Fuel and other utilities	119.8	119.4	119.4	116.8
Fuel oil and other household fuel commodities	89.7	90.0	89.7	88.9
Gas (piped) and electricity	118.5	117.6	117.5	115.5
Household furnishings and operation	118.3	118.4	118.3	116.4
Housefurnishings	108.8	109.4	109.0	107.7
Housekeeping supplies	129.8	130.1	130.1	129.4
Housekeeping services	133.8	132.6	133.0	128.6
Apparel and upkeep	133.3	129.2	130.2	131.3
Apparel commodities	130.8	126.5	127.6	129.1
Men's and boys' apparel	126.8	124.2	124.1	126.3
Women's and girls' apparel	132.6	125.1	127.5	131.3
Infants' and toddlers' apparel	130.1	128.3	128.8	129.4
Footwear	126.3	124.4	124.9	122.2
Apparel services	148.8	148.5	148.6	143.8
Transportation	126.8	127.2	126.9	123.8
Private transportation	125.4	125.5	125.4	122.1
New vehicles	128.3	128.6	128.5	124.8
Used cars	127.7	124.8	126.4	119.8
Motor fuel	101.7	102.8	101.7	99.8
Automobile maintenance and repair	142.2	141.4	141.6	137.8
Other private transportation	152.7	153.0	153.1	149.7
Other private transportation commodities	104.8	104.4	104.6	104.2
Other private transportation services	163.5	164.0	164.1	159.9
Public transportation	145.6	148.3	146.7	146.6
Medical care	192.3	190.7	191.5	179.7
Medical care commodities	189.5	188.6	188.9	180.0
Medical care services	192.9	191.1	192.2	179.7
Professional medical services	177.7	176.3	177.1	167.9
Entertainment	143.2	142.4	142.6	140.2
Entertainment commodities	131.3	131.6	131.6	130.1
Entertainment services	157.7	155.7	156.2	152.7
Other goods and services	187.0	182.3	183.9	175.8
Personal care	138.6	138.8	138.7	135.6
Toilet goods and personal care appliances	137.0	137.5	137.3	133.4
Personal care services	140.1	140.0	140.1	137.8
Personal and educational expenses	202.6	195.2	197.7	190.2
School books and supplies	193.0	189.3	189.7	184.5
Personal and educational services	203.5	195.8	198.6	190.8

¹Indexes on a December 1982 = 100 base.

Source: U.S. Department of Labor, Bureau of Labor Statistics.

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*Indicates an original article.

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